A QUARTER OF A CENTURY

OF

PRICES

BY

ELLSWORTH DAGGETT,

SALT LAKE CITY, UTAH.

1896.

Price 25 Cents.

A QUARTER OF A CENTURY OF PRICES

AN ATTEMPT TO DEFINE THE EXTENT AND MAGNITUDE OF THE MOVEMENT OF PRICES OF TWENTY-ONE OF THE PRINCIPAL COMMODITIES OF THE UNITED STATES SINCE 1870,

ALSO,

TO ILLUSTRATE BY DIAGRAMS VARIOUS SYSTEMS OF INDEX NUMBERS, TO COMBINE THEM INTO A GENERAL RECORD OF A MOVEMENT OF ALL PRICES AND TO NOTE THE RELATION OF LEGISLATION TO THE MOVEMENT OF PRICES.

BY

ELLSWORTH DAGGETT,

SALT LAKE CITY, UTAH.

TRIBUNE JOB PRINTING COMPANY, PRINTERS.
1896.

This paper is an attempt to define the extent and magnitude of the movement of prices of twenty-one of the principal commodities of the United States since 1870, and to call attention to some of the more important aggregate effects of the movement.

Also to plainly illustrate by diagrams the various systems of index numbers that have come to the writer's attention, to combine them into a general record of a movement of all prices, and to note the relation of legislation to the movement of prices.

It is a presentation not of argument or theory but of facts only, believed to be at this time particularly useful, and in a form which it is hoped will prove intelligible and suggestive.

Salt Lake City, Utah, Sept. 10th, 1896.

ELLSWORTH DAGGETT.

A Quarter of a Century of Prices

BY

ELLSWORTH DAGGETT,

SALT LAKE CITY, UTAH.

The twenty-one United States commodities herein specially and in detail considered are:

GRAIN GROUP.
- Wheat,
- Corn,
- Oats,
- Barley.

POTATO GROUP.
- Potatoes,
- Hay,
- Tobacco.

TEXTILE GROUP.
- Cotton,
- Wool.

FARM ANIMAL GROUP.
- Horses,
- Mules,
- Milch cows,
- Oxen, etc.,
- Sheep,
- Swine.

METAL GROUP.
- Pig Iron,
- Copper,
- Silver.

HYDRO-CARBON GROUP.
- Anthracite Coal,
- Bituminous Coal,
- Petroleum.

In Tables 1 to 21 will be found the amount or number of bushels, pounds, etc., the currency and gold prices per bushel, pound, etc., and the total gold values of each of the products considered, for the years 1870 to 1894 inclusive; and in the form of foot notes the work and usually the page from which the original figures were obtained. When statistics as to spot values are available for the entire period they have been used,

but with mineral products of which the government record is not complete for the entire period, other presumably reliable quotations have been used. The yearly prices therefore of iron, copper, anthracite and bituminous coal, petroleum, and also for wool, are not the spot values, nor can it be said that they are the prices at which the whole crop actually sold. They are, however, the ruling prices of important, usually the most important, markets, apparently determined in each case by methods uniform for the entire period and regarded as worthy of a place in the government statistical publication. Quotations of copper prior to 1880 were of necessity of Lake copper, a brand until lately commanding a slightly higher price than any other.

The twenty-one commodities given include every product, the value of which amounted to $25,000,000 in any one year since 1870, and of which the statistics of amount and values are to be found in government or other publications accessible to the writer.

It may also be mentioned that farm animals are quoted for the 1st of January of each year and doubtless includes many individuals previously or afterwards quoted.

The quantity therefore of farm animals produced in any one year is much less, perhaps not more than half the amount quoted. This consideration affects quantity only.

The basis upon which the currency values have been reduced to gold is that given in the report of the Statistician of the U. S. Department of Agriculture for 1893, page 559, viz.:

In 1870,	1 dollar	paper=	86	cents	gold.
" 1871,	"	"	89.5	"	"
" 1872,	"	"	89	"	"
" 1873,	"	"	87.9	"	"
" 1874,	"	"	89.9	"	"
" 1875,	"	"	87	"	"
" 1876,	"	"	89.8	"	"
" 1877,	"	"	95.4	"	"
" 1878,	"	"	99.2	"	"

In order that these commodities may be combined either by groups or altogether it is necessary that they should be reduced to a common denominator or uniform measure of value.

To do this it is necessary to find for each commodity the number of bushels, tons, etc., which at the average price per bushel, ton, etc., for the entire 25 years should equal a common fixed amount. This amount is therefore the common average value of what is here called the *Commodity Unit* of all of the articles taken, and is for reasons which will later appear, taken at 84 7–10 cents, or more exactly 84.736 cents.

That number of bushels, tons, etc., of any commodity which, if multiplied by its average gold price per bushel, ton, etc., for the entire 25 years, would amount to 84 7–10 cents becomes the measure of quantity of the assumed unit of such commodity.

Below is given a table summarized from Tables 1 to 21, in the second column of which is the total product or amount in bushels, tons, etc., of each of the commodities herein considered for the period of 25 years from 1870 to 1894 inclusive.

In the third column is given the total gold value of this product or amount and in the fourth column the average price per bushel, ton, etc. This latter being of course found by dividing the total value of each commodity by the total amount. In the fifth column is the amount of bushels, tons, etc., of each commodity which, at its average price per bushel, ton, etc., for the period, would equal 84 7–10 cents.

These quantities of the several commodities contained in the fifth column being equal in value to the same thing are therefore equal in value to each other for a period of 25 years, 1870 to 1894 inclusive.

If now we adopt for each commodity the corresponding quantity in bushels, tons, etc., appearing in column five, as the measure of quantity of our commodity unit, and compute two new columns of numbers and price of the commodity unit for each year of the period, we will have a series of tables as shown in last two columns of Tables 1 to 21, based upon a unit of common value, for the entire 25 years.

By means of these new tables all the different commodities, being expressed in units of the same value, may be combined in any desired manner, or for any desired period within that portion of history covered by the 25 years, and presumably without material error, for some years either before or after the period.

TABLE 0.

Summary of Tables 1 to 21 inclusive. Showing total amount, value and average price of 21 commodities for 1870 to 1894, inclusive, and also the number of bushels, tons, etc., in the commodity unit.

Commodity	Amount bushels, tons, etc.	Total Gold Value	Average Price per bushel, ton, etc.	Commodity Unit or No. of bushels, tons, etc., worth 84.7 cents
Wheat.....	10 001,471,005 bu.	$ 8,347,768,063	$ .835	1.015 bu.
Corn.....	36,890,124,261 "	14,682,163,419	.398	2.129 "
Oats.....	12,212,361,948 "	3,891,277,989	.319	2.656 "
Barley.....	953,419,180 "	569,742,537	.597	1.418 "
Potatoes.....	3,208,374,688 "	1,652,085,613	.515	1.645 "
Hay.....	780,967,778 tons	7,497,287,363	9.60	.088 ton
Tobacco.....	7,911,434,600 lbs.	638,358,449	.081	10.46 lbs.
Cotton.....	68,530,179,395 "	6,483,124,724	.095	8.92 "
Wool.....	6,011,960,384 "	2,142,095,997	.356	2 380 "
Horses.....	289,353,915 No.	18,593,912,136	64.26	.0132
Mules.....	45,237,623 "	3,397,895,190	75.11	.0113
Milch Cows...	325,834,520 "	8,325,407,536	25.55	.0332
Oxen, etc.....	642,852,338 "	11,440,626,202	17.60	.0482
Sheep.....	1,034,537,105 "	2,350 264,440	2.245	.3774
Swine.....	978,690,595 "	4,922,774,040	5.027	.1686
Pig Iron.....	114,182,222 tons	2,330,250,696	20.41	.0415 ton
Copper.....	3,106,603,955 lbs.	408,774,460	.132	6.419 lbs.
Silver.....	936,140,893 ozs.	976,594,603	1.041	.814 ozs.
Anthracite Coal	851,634,437 tons	2,996,776,591	3.52	.2407 ton
Bitumin. "	1,650,485,581 "	4,185,600,269	2.54	.3336 "
Petroleum.....	572,176,370 bbs.	511,143,728	.893	.9489 bbs.
	Total, -	$106,343,924,045		

The price per unit and number of commodity units for each commodity and for every year, 1870 to 1894, are given in the last two columns of Tables 1 to 21. The total values used in connection with them being of course those of the product or crops for the same year or period. The number of commodity units for any commodity in any year given in the table was found by dividing the total number of bushels, tons, etc., in corresponding crop or product by the number of bushels, tons, etc., in the commodity unit for that commodity, or to be more literal by multiplication by the corresponding reciprocal carried out to five or more places. The price per commodity unit may be found by dividing the total value by the number of commodity units.

It is therefore true with every commodity in each year that the number of commodity units multiplied by the price per commodity unit produces the total value of the crop.

As indicated above it will be found with each commodity that the relation between the price per commodity unit or the number of commodity units, in any period as compared with any other period, is precisely the same as that between the gold price per bushel, ton, etc., or the number of bushels, tons, etc. for the same two periods.

Hence the statement of the gold value of the crop and the price per commodity unit and number of commodity units in the same serves perfectly for the study of prices of single commodities and renders it possible in addition to compare one with another and to combine any or all of them in any desired manner or for any desired period, between and including 1870 and 1894.

In table 22 is shown for each year, 1870 to 1894 inclusive, the combination of the number of units and the gold value of all 21 commodities.

In this last named table the sum of the values of the 21 commodities for the years 1870, 1871, 1872, and the total number of commodity units in the same are given, and it will be noticed that the amounts agree, or in other words, that the average value per unit of all the commodity units for the period 1870, 1871 and 1872, are exactly $1.00.

It was to produce this result that the average value of the commodity unit was taken at 84 7-10 cents. The equation by which this result was reached, a simple one as to terms, which will readily suggest itself need not here be given. It involved many reductions of large numbers used.

It will be observed that taking the average price per commodity unit of all 21 commodities used equal to $1.00 for the period 1870, 1871 and 1872, means the adoption for the purpose of this paper of that period as a period of comparison during which the average of all prices under consideration was $1.00 per unit. Outside of this period prices, either of single or combined commodities, are expressed in figures which indicate at a glance and without mental effort their relation to the true average price for the period of comparison of all commodities.

The reduction to a common denominator, or to a unit of uniform value has been, for reasons given below, performed only from the beginning of 1870 to the end of 1894, and during this period subject to slight errors herein mentioned. The value and prices of commodities for 1895 have not entered into the equation by which the value of the commodity unit was found. To include the new figures would necessitate an entirely new calculation involving many hundred reductions to produce a result differing so slightly from that given here as to be invisible in the diagram and of no practical moment in the table. The quantity of each commodity in the commodity unit is taken for 1895, the same as for previous years.

The calculation of the value of the commodity unit, and of the number and price of the commodity unit, for each commodity and for each year, was done in April and early May, 1895, before the mineral statistics for 1894 were published. Approximate estimates of the amount of iron, silver, anthracite and bituminous coal were made, and the approximations, given in the tables have entered into the calculation. The revised and corrected amounts are also given and these only enter into the construction of Table 22. Three other errors, one of a half million bushels of oats, a second of 20 cents per head in the average price of oxen, and a third of three cents per head in average price of sheep, also found their way in spite of much care, into the calculation of the value of the unit used. The combined effect of all the errors on the final result are so small as not to practically affect the accuracy of the work.

Inspection of the tables of the different commodities show clearly the great annual fluctuation in price and the relation of gross production to price. They also show how misleading might be deductions based upon the movement of one or even of a group of commodities for a short period.

As the average price per unit for the twenty-five years, 1870 to 1894, inclusive, of each commodity is the same as that of every other commodity, and the same as the true average of all commodities, it follows that by comparing the table of any single commodity with the combined table or diagram, its true relation to the average of all commodities may be determined.

In the last column of Table 22 is carried out the total

difference for each year between the actual selling value and the value of the same number of units at the price prevailing in 1870-72, or the total depreciation in the twenty-one commodities for the year. The total depreciation of all twenty-one articles for the twenty-three years from 1873 to 1895 inclusive, amounts to more than twenty-two billions of dollars, and the actual selling value of all twenty-one articles for the same period is over one hundred billions of dollars.

The depreciation on silver for the period 1873-95 was two hundred and ninety-eight millions of dollars, or 1.36 per cent. of the depreciation on the twenty-one commodities.

The movement downward of prices during the twelve months of 1895, extended uniformly eight months into 1896, would, on the first of September, reach the fifty cent per unit line.

Diagram 22 is representative of Table 22, and shows also the gross production in units. Diagram 22A, made in a different manner, represents the relative quantities and values also. Either of these diagrams, or Table 22, show that there has been since 1873 a general movement of prices downward with four upward movements, one of three years' duration, and three of one year's duration. The last upward movement occurred between 1889 and 1890. Since 1890 the course of prices has been always downward, but at a varying rate.

SOME OF THE EFFECTS OF THE LATE DECLINE IN PRICE.

It may not be amiss to consider briefly some of the aggregate effects of that portion of the movement since 1890.

The depreciation each year from 1891 to 1895, as compared with the previous year, of 21 commodities, may thus be shown:

Year.	Price per Unit, Cents	Difference in Price per Unit from Previous Year Cents	Difference in Percentage of Previous Year	Aggregate Depreciation from Prices of Previous Year Millions of Dollars
1890	85.37	.....	.....	.....
1891	80.18	5.19	6.08	328
1892	76.41	3.77	4.70	236
1893	76.19	.22	.29	15
1894	71.30	4.89	6.42	323
1895	58.70	12.60	17.67	916
		Total.....	.....	1818
		Average per	year five years	363.6

The effect upon the value of farm lands of a long-continued fall in prices of the commodities raised cannot well be estimated, but must have been to greatly reduce that value, presumably to as great an extent as the products themselves were reduced.

The effect of the late continuous fall in prices upon payments for taxes, interest, and other fixed charges payable in money is, as judged by the quantities of commodities required to meet such charges, to continually augment them. For example, if in 1890 the total annual charge for the support of general and local governments of all kinds, and interest for all debts in the United States was two billions of dollars, which was probably true, and if this charge for taxes and interest as expressed in dollars remained unchanged for the ensuing five years, then the number of commodity units required each succeeding year to meet such charge, and their value at prices prevailing in 1895 may be shown thus:

Year	Gold Value per Unit Cents	Units Purchasable with a Dollar	Units Required to Meet Two Billions of Dollars Fixed Charges Millions	Value of These Units at Prices Prevailing 1890 Millions of Dollars
1890	85.4	1.171	2342	2,000
1891	80.2	1.247	2494	2,130
1892	76.4	1.309	2618	2,236
1893	76.2	1.312	2625	2,241
1894	71.3	1.403	2805	2,396
1895	58.7	1.704	3407	2,910

As in 1870-72 inclusive the value of the unit was one dollar, the unit column in the above table may also signify dollars at prices prevailing 1870-72 inclusive. If we again assume the movement in 1895 to have been uniformly prolonged to Sept. 1st, 1896, the gold value per unit would have been 50 cents, and the number of commodity units required in 1896 to meet $2,000,000,000 fixed charges would have been 4,000,000,000, and their value, at prices prevailing in 1890, $3,416,000,000 or $1,416,000,000 more than in 1895.

The effect on all business of the increase in the purchasing power of gold, shown in column three of the above table, must be depressing—on any new business practically prohibitory. The increase from 1890, when a dollar would purchase 1.171

commodity units, to 1895, when its purchasing power was 1.704 units, has been .533 units, or 45.5 per cent. for the five years, or an average of 9.1 per cent. per annum. That is, gold stored in a vault in 1890, would at the end of 1895, having remained in the meantime absolutely idle, have increased in value at the rate of 9.1 per cent. per annum. During this same period commodities, and, presumably, property generally, have depreciated from 85.4 cents per unit in 1890 to 58.4 in 1895, equivalent to 31.3 per cent. for the five years, or on the average of 6.2 per cent. per annum.

Money cannot seek business or investment under such conditions.

The effect upon debts of falling prices for the past five years may be shown in the same way.

According to the census report 1890, Book of Mortgages, page 102, the total national, state, county, and municipal debt amounted in 1890 to	$ 2,027,170,546
The minimum private debt including railway and corporation debts was	17,000,000,000
Making a total of	$19,027,170,546

Now assuming that no more debt has since been contracted, and quite neglecting the interest, the number of commodity units required to equal in value 19,027,000,000 of dollars during 1890 and following years is as follows:

Year	Gold Value per Unit Cents	Commodity Units Required to Equal $19,027,000,000 Millions	Value of Units in Preceding Column at Prices Prevailing in 1890 Millions of Dollars	Annual Increase of the Debt of 1890 Measured in Commodity Units and Expressed in Dollars at Prices Prevailing in 1890 Millions of Dollars
1890	85.4	22,280	19,027	.....
1891	80.2	23,725	20.261	1,234
1892	76 4	24,905	21.269	1,008
1893	76.2	24,970	21 324	55
1894	71.3	26 686	22,790	1,466
1895	54.7	32,414	27,682	4,892

Here also the unit column in the above table may signify dollars at prices prevailing 1870 to 1872, inclusive.

If we again assume the movement of prices in 1895 to have been continuous and uniform into 1896, then in Spetember, 1896, the number of commodity units required to equal $19,027,-

000,000 would have been $38,054,000,000, and the increase of the debt for the eight months of 1896, measured in commodity units expressed in dollars at prices of 1890, would have been $4,816,000,000.

In other words, during 1895, and presumably now in September, 1896, the debt of the country, quite independent of accumulating interest and of recent bond issues or other recorded additions, is increasing, as measured in commodities (by which only it can be paid), and expressed in dollars at prices of 1890, at the rate of more than $400,000,000 per month for 1895, and in 1896 at the rate of over $600,000,000 per month.

The second column of Table 22 gives the average price per unit of all 21 articles for each year, computed for such a size of commodity unit, that the average price for the period 1870, 1871 and 1872 was $1. The series of numbers, therefore, in this second column is simply a system of index numbers based on a price of $1 for average of all articles for the period named, with, however, the difference that the scheme is absolutely quantitive.

It recognizes not only the exact importance due to the relative volumes of all articles quoted, but it also accurately registers the annual change in the quantity of the same article.

Were 26 years all of history, the United States all the world, and the 21 commodities cited all of that world's product, then prices as a whole would have declined from the average of period 1870–72 to the average of 1895, 41.3 per cent., or to 58.7 cents per unit.

But the United States is not all the world, nor are our 21 articles by any means all the products even of the United States. In the absence of other complete data it may be assumed that the average of all United States prices have on the whole declined to an equal or greater extent than the 21 articles here considered. The only data available bearing upon this point is the series of index numbers given in "Movement of Prices," 1895, U. S. Treas. Dept., covering a very large number of articles in eight groups, but carried down only to 1891. This system reduced to basis 1870–72 = 100, is given for years 1870 to 1891 in Table 23 and in Diagram 23. Compared with 21 U. S. commodities and reduced to same basis, it shows for the five

years including and preceding 1891, an average price of 76' about 7 points lower than the index number for the 21 articles for the same period. This, so far as it indicates anything for the year 1895, shows that the general average of all prices for the United States should for the year 1895 have been even lower than 58.7 per cent.

PRODUCT LESS NET EXPORT OR CONSUMPTION.

Table 22 and Diagram 22 show with the average price the gross production in units for the period 1870–95 inclusive. In both table and diagram are omitted, on account of their absence from the original record, the product and price of barley, potatoes, hay and tobacco, for years 1889–92 inclusive, and tobacco for 1895.

In Table 25 are shown the gross product in units, price per unit, total value in dollars, net exports, and the total and per capita consumption, or product less net exports, of the seven commodities constituting the food products (except potatoes which, as mentioned above, is not completely recorded) and the same details of the seven manufacturing products.

In Diagram 25 is shown the price and consumption per capita of each group.

Both of these tables extend as far back as the statistics accessible to the writer allow.

The food group aggregating in value for the eleven years, 1885–95, $27,464,800,000, and averaging $2,496,000,000 per year, shows in 1895 a per capita consumption of 38.9 units, or 10.8 units less than the 49.7 units of 1885.

The manufacturing group with aggregate value of $10,274,-800,000, and average value of $934,000,000 per year, shows in 1895 a per capita consumption of 16.7 units or 3.3 units more than the 13.4 units of 1885.

The indicated increase in consumption per capita for the manufacturing products is less than the supposed advance of manufacturing industry.*

* In Table 25 the net exports, where not given direct, have been computed from the tables of exports and imports in the U. S. Statistical Abstract, 1894 and 1895. Hog products being figured at 200 lbs. per animal; fresh beef at 1000 lbs. per animal; cured or canned beef at 500 lbs. per animal, and mutton of 50 lbs. per animal.

TABLE 25.

Gross Product in Units, Price per unit, Total Value in Dollars, Net Exports and Total and per Capita Consumption for period 1885 to 1895 inclusive, of

Wheat, Corn, Oats, Milch Cows, Oxen, Sheep and Swine.

Fiscal Year	Gross Product Millions of Units	Price per Unit	Total Value Millions of Dollars	Net Export Units	Consumption, or Product Less net Export	
					Total Millions of Units	Units per Capita
1885	2975.1	.876	2606.0	186.9	2788.2	49.7
86	2939.1	.864	2532.3	157.3	2781.8	48.5
87	2948.0	.832	2451.6	203.4	2744 6	46.8
88	2899.1	.859	2489.3	160.5	2738.6	45.7
89	3148.1	.809	2546.3	156.4	2991.7	48.8
1890	3358.9	.732	2457.6	216.1	3142.8	50.2
91	2960.4	.867	2568.1	176.0	2784 4	43.5
92	3512.8	.795	2791 3	314.6	3198.2	48.9
93	3229.1	.760	2452.8	253.9	2975.2	44.5
94	3032.2	.765	2318.7	241.4	2790.8	40.9
95	2917.5	.771	2250.8	205.0	2712.5	38.9
85-95	33920.3	.....	27464.8	2271.5	31648.8	503.4
Aver	age for 11 yrs	.810				

The same details for

Cotton, Wool, Pig Iron, Copper, Anthracite and Bituminous Coal and Petroleum.

1885	955.2	.815	778.5	200.2	755.0	13.4
86	965.9	.774	747.2	103.0	862.9	15.0
87	1064.1	.742	789.4	202.0	862.1	14.7
88	1128.2	.849	957.4	198.2	930.0	15.5
89	1210.0	.788	953.4	207.1	1002.9	16.4
1890	1213.1	.780	945.9	191.4	1021.7	16.3
91	1355.5	.776	1052.2	238.9	1116.6	17.5
92	1473.2	.750	1104.2	297 6	1175.6	18.0
93	1559.1	.694	1082.6	379.8	1179.3	17.6
94	1384.9	.701	970.7	307.0	1077.9	15.8
95	1386.0	.645	893.3	224.6	1161.4	16.7
85-95	13695.2	.....	10274.8	2549.8	11145.4	176.9
Aver	age for 11 yrs	.750				

Note—This table is based upon fiscal year and the preceeding calendar year.

The statistics used in determining consumption were those in U. S. Statistical Abstracts for 1894 and '95.

AVERAGE PRICES IN OTHER COUNTRIES.

Other systems of index numbers have been calculated. Those which have come to the attention of the writer being as follows:

The London Economist's system, based upon 47 articles in 22 classes.

The original publication containing these figures not being accessible, recourse has been had to "Movement of Prices," 1895, page 20, for years 1884 to 1895 inclusive, and to the translation of Dr. Soetbeer's "Materials," etc., in "Bimetallism in Europe" (Consular reports No. 87), page 602, for years 1870 to 1885. The series used is that in which no regard has been paid to relative importance, no complete series of the weighted numbers being available. The index numbers are therefore not quantitive. The numbers from the above sources have been reduced to the basis of 1870-72=100, and appear in Table 23, and in Diagram 23a.

Another series of British index numbers is that of Mr. Sauerbeck involving 45 articles. This series also is given in Table 23 and in Diagram 23a, but as the numbers for 1870-72 are not quoted either in "Movement of Prices" or in any other accessible publication, I have been obliged to use the basis 1867 to 1877 as equal to 100, this being the period upon which the accessible figures are based. It may be here stated that the Economist's Index Numbers, also British, for the 11 years 1867-77 average 101.88, and that the Hamburg Index Numbers for the same period average 100.16, indicating that the difference in the basis in the Sauerbeck series between 1870-72=100, which should be used, and 1867-77=100, which we are obliged to use, is not likely to be very material. (See note under Table 23.)

Sauerbeck's Index Numbers also appear to be based upon price only, i. e. without regard to quantity. The figures used here appear in part in "Bimetallism and Monometallism," by Rev. Dr. Walsh, page 47, and in part in "Movement of Prices," page 15.

A French series of index numbers, involving 22 classes of articles, is mentioned by Dr. Soetbeer on page 601-602 "Bimetallism in Europe." The series extends only to 1883, and is given for that time in Table 23 and in Diagram 23b. It

appears that some regard was paid to the relative importance of the different articles, though in an imperfect manner. This series is also reduced to basis 1870-72=100.

The Hamburg Board of Trade series upon 100 articles to which is added 14 articles of British export, given somewhat at length in "Bimetallism in Europe," pages 607 to 636, is a very complete and extensive series of index numbers. It unfortunately can not be here given later than for 1886, the date to which Soetbeer carried it in his "Materials, etc.," and I can not learn that it has been carried beyond that date. These numbers reduced to a basis of 1870-72 equals 100, are also given in Table 23, and in Diagram 23b.

Mr. Palgrave's statement of prices (silver) in India of seven articles, found on page 603 of "Bimetallism in Europe," is there worked out into a series of index numbers of the prices in silver. The numbers have been reduced to gold prices in accordance with the gold price of silver given in the last column of the statement mentioned above, and reduced to a basis of 1870-72=100, and also appear in Table 23 and in Diagram 23b.

The column in Table 23 marked "Arithmetical Average" is the combination, arithmetical, of the various index numbers in the seven systems. This is also shown in Diagram 23c by the black line.

The quantities and values in the foreign country of imports of sugar, coffee* and tea, given on pages 290, 295 and 296 respectively of U. S. Statistical Abstract for 1895, have been reduced for the period 1870-94 to the same common measure used for the 21 commodities and combined resulting in a series of quantitive index numbers with a basis 1870-72=101 6-10. These numbers given separately in Table 24 are not combined with the 21 articles because they are not United States products, nor with the 7 systems of index numbers given in Table 23, because the amount represented, only about four billions of dollars, is presumably very much less than those systems represent. It may, however, serve to show that the same movement in prices and in the same direction and about to the same extent that Table 23 records for the four greatest civilized nations

*In the case of coffee the price for 1891-92 being, according to the official record, too high, it has been replaced by the average of 1890-94.

of the earth, and for India with its 240,000,000 of people, has extended also to the islands of the sea.

TABLE 24.

Quantitive Index Numbers

Of gold prices in the foreign country of imports into the United States, of Sugar, Coffee and Tea for period 1870 to 1895, reduced to same common measure used for the 21 commodities and combined. Based upon unit price for 1870–72= 1.016.

Year	Index Number	Year	Index Number	Year	Index Number
1870	.956	1879	.885	1888	.733
1871	.970	1880	.972	1889	.777
1872	1.121	1881	.946	1890	.837
1873	1.175	1882	.888	1891	.791
1874	1.209	1883	.80	1892	.788
1875	1.031	1884	.747	1893	.781
1876	1.019	1885	.601	1894	.787
1877	1.135	1886	.628	1895	.672
1878	1.082	1887	.638		

The foreign systems of index numbers given in Table 23 have been devised and wrought out by learned men for the purpose of studying the movement of prices.

The articles selected have undoubtedly included those of the greatest importance. They represent, therefore, prices of enormous quantities of commodities and the average of these seven series should indicate with some approach to accuracy, the movement of the world's prices.

It must be admitted, however, that any attempt to estimate the volume represented by the eight systems of index numbers would be largely guess work, unless undertaken after a long investigation and with the aid of a complete statistical library.

It may be said, however, that the value represented by the index numbers of only 21 commodities in the United States for the twenty-six years is known to be 110 billions of dollars, and that the value indicated is certainly very much greater than this, in all probability not less than 200 billions of dollars for commodities only.

In Europe and India, with a population aggregating eightfold that of the United States, the total quantity of commodities involved in the movement and the aggregate amount of the depreciation during the period 1873-95 inclusive, must have been quite beyond the human grasp.

Diagram 23c is of the arithmetical average of the seven systems of index numbers, and also of the price of silver calculated upon the basis coinage value 1.2929=100. By comparing the two diagrams the relation of the price of silver to the world's movement of the prices of commodities is apparent.

The relation to United States movement of prices and to British and other foreign movements of prices, of silver legislation, may be made clear by noting on the diagrams of the various systems of index numbers the nature of the movement immediately following the important acts relating to silver.

For convenience is here given the dates of the principal legislation upon silver.

1871—Preliminary action of Germany adopting gold standard.

1873—Demonetization of silver and adoption of gold standard by United States.

1873—Suspension or limitation of silver coinage in Belgium, France and Holland.

1873—Denmark, Sweden and Norway adopt gold standard.

1873—Germany, final action, adopting gold standard.

1874—Legal tender for silver taken away, in United States, by statute.

1878—The Bland-Allison Act, restoring legal tender to silver and providing for the purchase of two to four million ounces of silver per month.

1890—Repeal of the Bland-Allison law and passage of the Sherman Bill, calling for the purchase of 4,500,000 ounces per month and the issue of treasury notes therefor.

1893—Repeal of the Sherman bill.

1893—Closing of the India mint against coinage of silver on private account.

It will be observed that the legislation in 1873 and 1874 in the United States and other countries against silver, was accompanied, or immediately followed, by a marked decline, lasting

several years, in the price not of silver only, but of commodities, as evidenced by each of the seven diagrams.

That the Bland-Allison act restoring legal tender to silver, and in other ways supposed to be favorable to silver, was accompanied, or a year later followed, by a marked rise in the price of commodities as shown by six out of seven of the series of Index Numbers.

That the repeal of the Sherman bill and the closure of the Indian mint to coinage of silver on private account in 1893 was immediately followed by a marked decline in prices of commodities, as evidenced by each of the three series of Index Numbers carried out to this date.

The aggregate effect of any one of these movements cannot be exactly defined, because, while we know what did in fact take place after important legislation, we can only surmise what would have happened without legislation.

Thus Table 22, or Diagram 22, show that from 1874 to 1878, the 21 United States commodities declined 20 cents per unit, and that in 1878, the date of the restoration to silver of its legal tender function, began a rise lasting three years, and reaching in 1881 97 cents per unit. Now it is altogether likely that the price line descending so rapidly prior to 1878, would, in the absence of any legislation whatever, have reached in the succeeding years a still lower level than 75.8 cents per unit; but assuming that this price line of 1878, would, in the absence of any legislation, have simply remained at the level reached in 1878 for the ensuing ten years, then the money value of our 21 commodities for the ten years would have been over ten cents per unit less than that actually realized. Ten cents per unit on the 54,684,000,000 units produced from 1879 to 1888, inclusive, would amount to $5,468,000,000.

The effect of the decline in prices following the repeal of the Sherman bill and the closure of the Indian mint to coinage of silver on private account has, for the 21 United States products, been already mentioned. The aggregate effect of this decline on British prices, as shown by the Economist and Sauerbeck Index Numbers, cannot of course be given, as data as to volume of the commodities are wanting.

THE CAUSE OF THE MOVEMENT.

We have hitherto considered the movement of prices in the United States, with some of the aggregate effects of the same; the movement of the world's prices and the relation, in point of time, of legislation to the various movements. It remains to consider some of the facts which may account for or explain the movement.

Below is a list of the countries in Europe, North and South America and Oceanica, which were presumably included as "civilized nations," within Dr. Soetbeer's estimate of 1885, of the total gold in civilized countries, given in Consular report No. 87, page 528.

No special significance is to be attached to this classification; the object of it being merely to show the countries containing the population referred to in the various years:

GOLD STANDARD.

Australia and New Zealand. Austria Hungary, in 1891, previously Silver Standard. Brazil. Canada. Chili, in 1895, previously Silver Standard. Finland, in 1877, previously Double Standard. Germany, in 1873, previously Silver Standard. Great Britain. Portugal. Roumania, in 1890, previously Double Standard. Scandinavia, in 1873, previously Double Standard. Turkey, in Europe only. United States, 1874 to 1878 only. Uruguay.

DOUBLE STANDARD.*

Argentine Republic and Venezuela. Belgium. Bulgaria. Cuba and Hayti. Finland, prior to 1877. France. Greece. Italy. Roumania, prior to 1890. Servia. Spain. Scandinavia, prior to 1873. Switzerland. United States, except 1874 to 1878.

SILVER STANDARD.

Austria Hungary, prior to 1891. Chili, prior to 1895. Germany, (present area,) prior to 1873. Mexico. Netherlands. Russia, in Europe; without Finland. South America; without Chili, Brazil, Uruguay, Argentine, and Venezuela.

The following countries are not included either in population or in estimate of gold or silver: India, China, Japan, Egypt, Straits Settlements, Turkey in Asia, and Russia in Asia.

* So called on account of the general existence of legal tender silver, actual standard may be gold.

The population of the countries by groups, as determined in most instances by the Statesmans' Year Book of 1896, is as follows, in millions:

	YEAR			
	1870	1880	1890	1896
Gold Standard Countries	55.8	118.8	137.	191.6
Double Standard Countries	143.6	165.	178.	192.4
Silver Standard Countries	167.4	139.	155.9	122.2
Total Civilized Countries	366.8	422 8	471.0	506.2

In table 26, given below, column "a" shows the total amount of gold in the civilized world at the end of the different years. The bold-faced figures for 1870-80-85, being the estimate made by Dr. Soetbeer, (see Consular Report, No. 87, page 528). The figures between Dr. Soetbeer's estimate are interpolations. Those after 1885 are based upon the World's production; (see U. S. Mint Report); and upon a non-monetary consumption composed of a consumption in the arts of $56,400,000 in 1885, (Soetbeer's estimate); increasing by one per cent. each succeeding year, and of a flow to the East of $20,000,000 per year to and including 1892; and in 1893-94 and 1895, of a movement in the opposite direction of $32,000,000.

Column "b" shows the gold in the great Government Banks in Europe and Australia. Those figures in Italics are interpolated on account of incomplete record. Other figures not specially noted are from Consular Report No. 87. The figures there given are reduced to dollars by dividing the number of marks by four; the francs by five, and by multiplying the English pound by five; and are therefore not exact.

The last two columns show the gold in circulation, total and per capita for Gold and Double Standard countries.

The last column will to some extent lack literal accuracy, because there was at the beginning and throughout the total period *some* gold in the Silver Standard Countries. Nearly all of such gold was, however, in the great Banks, and cuts no figure in the circulation; that remaining in circulation being too small, as compared with the entire stock, to materially affect the result.

It must also be borne in mind that the United States in 1870 and until 1878 had very little gold; most of the time but $25,000,000, and in 1895, according to the Treasury Department statement, $636,000,000. Had the United States been classed in 1870 as a non-user of gold, and omitted from the population of Column "c" until 1880, when it became a gold-using nation, the per capita for 1870 would be nearly 14., and that for 1880 10.4; below which year the table would of course remain unchanged.

Diagram 26 is a graphic presentation of table 26, except the last or per capita column, which is shown on diagram 27.

Table 27 is perhaps sufficiently described by its heading. Dr. Soetbeer's estimate of the amount of silver in civilized countries in 1885, which in connection with the data given with it, would appear to equally well establish the amount for 1880, has served as a basis for this table. That estimate has been carried on to 1895, and back to 1872.

The object of this table being in part to show the relation of the value of all circulating metallic money to the number of people *using* it; the per capita column has been computed as far down as 1879 in two ways; first by including the population of the United States in the divisor, and second, by omitting it. As during the period 1862 to 1879, there was very little of either silver or gold in the United States, the second column would appear to best indicate for the entire civilized world the true relation of value of circulating precious metals to population. The second of the two series, in which the population of the United States is omitted, is the one plotted in diagram 27.

Diagram 27 shows in the lower part the coining and commercial value of the world's stock of silver.

In the upper part is plotted the circulating gold in civilized countries per capita of gold standard and double standard countries, shown by the black line with small circles; also, shown by a double line and black dots, the value of the circulating metallic money per capita of civilized countries.

These two series of numbers are, in 1872, so near 10, that, by regarding each of the large divisions of the vertical scale as one dollar, they may for casual inspection, be plotted direct, without the reduction, which would make them exactly compar-

able with each other, or with one in which 1870-1872 was equal to 100.

The third line in the upper part, solid, is the arithmetical average of seven systems of index numbers, previously given in diagram 23-c, involving 264 articles or groups, and I believe fairly representing the world's prices for a quarter of a century.

As the object of table and diagram No. 27 is to consider the relation of precious metals used as money, (and not of paper or token money) to population, the commercial value of the silver is used.

Some interesting facts appearing from the table and diagrams herein contained may be briefly mentioned.

The remarkable agreement between the arithmetical average of seven series of index numbers, which we may say represents the world's prices, and the comparable series showing the price of silver, shown in diagram 23-c, would indicate beyond question that the movement of prices in general, and that of silver, has been produced by one and the same cause.

The comparison of the world's prices with the amount of circulating gold per capita, and with the value of circulating gold and silver per capita, as shown by tables and diagrams 26-27, indicate that the value or purchasing power of gold increases as the amount of it per capita in circulation diminishes, and that the value or purchasing power of gold and silver taken together, increases as the total value per capita in circulation diminishes.

The difference between the coining value and the commercial value of the silver in the world, at the end of 1895, was roundly, $1,200,000,000, U. S. coining value.

Although the World's production of silver from 1872 to 1895 amounted to $3,182,000,000, U. S. coining value, the World's stock of silver in 1895 was only $927,000,000 more than in 1872; the non-monetary consumption amounting to $2,250,000,000, U. S. coining value.

The actual commercial value of the World's stock of silver in 1895 was $269,000,000 less than in 1872.

The World's stock of silver in 1871 was $1,490,000,000, U. S. coining value; a smaller amount than at any time since, and also less than at any previous year for forty years or more.

TABLE 1.

Production and value of **Wheat** in the United States. Gold Basis.

Year	Product in Bushels	Price per Bushel		Total Value of Crop in Dollars	Commodity Units	
		Currency	Gold		Price per Unit of 1.015 bu	Number of Units in Crop
	a	*a*		*a*	*c*	*c*
1870	*b* 235,884,700	$1.042	$ .907	213,902,589	$ .920	232,440,783
71	230,722,400	1.258	1.127	259,918,579	1.143	227,353,853
72	249,997,100	1.24	1.104	276,060,534	1.121	246,347,142
70–72	716,604,200	.....	1.046	749,881,702	1.062	706,141,778
1873	281,254,700	1.15	1.011	284,439,834	1.026	277,148,381
74	308,102,700	.945	.849	261,705,998	.862	303,604,401
75	292,136,000	1.009	.877	256,285,383	.891	287 870,814
76	289 956,500	1.035	.93	269,632,851	.944	285,723,135
77	364,194,146	1.084	1.034	376,539,773	1.049	358,876,911
78	420,122,400	.777	.771	323,735,653	.782	413,988,613
79	448,756,630	1.108	1.108	497,020,142	1.124	442,204,783
1880	498 549,868	.....	.951	474,201,850	.956	491,271,040
81	383,280,090	.....	1.192	456,880,427	1.21	377,684,201
82	504,185,470	.....	.884	445 602,125	.897	496,824 362
83	421,086,160	.....	.911	383,649,282	.925	414,938,302
84	512 765,000	.....	.645	330,862,260	.654	505,278,631
85	357,112,000	.....	.771	275,320,390	.783	351,898,165
86	457,218,000	.....	.687	314 226 020	.697	450,542,617
87	456,329,000	.....	.681	310,612,960	.691	449,666,597
88	415,868,000	.....	.926	385 248,030	.94	409 796,327
89	490,560,000	.....	.698	342,491,707	.709	483 397,824
1890	399 262,000	.....	.838	334,773,678	.851	393 432,775
91	611,780,000	.....	.839	513,472,711	.852	602 848,012
92	515,949,000	.....	.624	322,111,881	.634	508,416,145
93	396,131,725	.....	.538	213 171,381	.546	390,348,202
94	460,267,416	.....	.491	225,902,025	.498	453 547,512
70–94	10,001,471,005	.....	.....	8,347,768,063	.847	9,855,449,528
	True average, Value of comm	odity	.835 unit=	.84736 ÷ .835 =	1.015	bu. Unit for Wheat.
1895	*d* 467,102,947	.....	.509	237,938,998	.517	460,283,244
73–95	.....	.....	.....	7,835,825,359	.815	9,609,590,994

a From U. S. Statistical Abstract, 1894, page 284, unless otherwise noted.
b Direct from U. S. Agricultural Report, 1870.
c Computed.
d From U. S. Statistical Abstract, 1895, page 298.

TABLE 2.

Production and value of **Corn** in the United States. Gold Basis.

Year	Product in Bushels	Price per Bushel		Total Value of Crop in Dollars	Commodity Units	
		Currency	Gold		Price per Unit of 2.129 bu	Number of Units in Crop
		$	$		$	
	a	*a*		*a*	*c*	*c*
1870	1,094,225,000	.55	.4785	*b* 523,599,956	1.019	513,957,483
71	991,898,000	.4822	.4315	428,056,930	.9189	465,894,491
72	1,092,719,000	.3984	.3546	387,282,868	.7545	513,250,114
70–72	3,178,842,000	.....	.421	1,338,939,754	.8962	1,493,102,088
73	932,274,000	.4796	.4216	393,073,875	.8977	437,889,098
74	850,148,500	.64	.5816	494,488,729	1.238	399,314,750
75	1,321,069,000	.4204	.3658	483,237,959	.7787	620,506,109
76	1,283,827,500	.3705	.3327	426,991,107	.7079	603,013,777
77	1,342,558,000	.3581	.3417	458,533,804	.7272	630 599,492
78	1,388,218,750	.3178	.3153	437,624,178	.6712	652,046,347
79	1,547,901,790	.....	.3752	580,486,217	.7984	727,049,471
1880	1,717,434,543	.....	.3959	679,714,499	.8427	806,679 005
81	1,194,916,000	.....	.636	759,482,170	1.353	561,252,045
82	1,617,025,100	.....	.4847	783,867,175	1.032	759,516,689
83	1,551,066,895	.....	.4242	658,051,485	.9032	728,536,121
84	1,795,528,000	.....	.3569	640,735,560	.7598	843,359,502
85	1,936,176,000	.....	.3283	635,674,630	.698	909,421,867
86	1,665,441,000	.....	.3665	610,311,000	.7802	782,257,638
87	1,456,161,000	.....	.4438	646,106,770	.9447	683 958,822
88	1,987,790,000	.....	.3410	677,561,580	.7257	933,664,963
89	2,112,892,000	.....	.2831	597,918,829	.602	992,425,372
1890	1,489,970,000	.....	.5066	754,433,451	1.078	699,838,909
91	2,060,154,000	.....	.406	836,439,228	.8644	967,654,334
92	1,628,464,000	.....	.3944	642,146,630	.8396	764,889,541
93	1,619,496,131	.....	.3654	591,625,627	.7778	760,677,333
94	1,212,770,052	.....	.4577	554,719,162	.9735	569,638,093
70–94	36,890,124,261	.....	.....	14,682,163,419	.8475	17,327,291,366
	True average..	.....	.398			
	Value of comm	odity	unit=	.84736 ÷ .398 =	2.129	bu. Unit for Corn.
1895	*d* 2,151,138,580	.....	.264	567,509,106	.562	1,010,389,791
73–95	.....	.....	.....	13 910.732,775	.826	16,844,579,069

a From U. S. Statistical Abstract, 1894, page 234, unless otherwise noted.
b Direct from Agricultural Report, 1870.
c Computed.
d From U. S. Statistical Abstract, 1895, page 293.

TABLE 3.

Production and value of **Oats** in the United States. Gold Basis.

Year	Product in Bushels	Price per Bushel		Total Value of Crop in Dollars	Commodity Units	
		Currency $	Gold $		Price per Unit of 2.656 bu $	Number of Units in Crop
	a	a		a	c	c
1870	247,277,400	.4334	.377	b 93,208,938	1.001	93,099,940
71	255,743,000	.402	.359	91,890,177	.954	96,287,240
72	271,747,000	.336	.299	81,270,982	.794	102,312 746
70–72	774,767,400	.....	.344	266,370,097	.913	291,699,926
73	270,340,000	.374	.329	88,933,484	.874	101,783,010
74	240 369,000	.52	.468	112,417,730	1.242	90,498,929
75	354,317,500	.365	.318	112,664,939	.844	133,400,539
76	320,884,000	.3516	.316	101,353,578	.839	120,812,826
77	406,394,000	.292	.279	113,203,119	.74	153,007,341
78	413,578,560	.2465	.2445	101,130,263	.649	155,712,328
79	363,761,320	.331	.331	120,533,294	.88	136,956,137
1880	417,885,380	.....	.3595	150,243,555	.955	157,333,846
81	416,481,000	.....	.464	193,198,970	1.231	156,805,097
82	488,250,610	.....	.375	182,978,022	.995	183,826,355
83	571,302,400	.....	.327	187,040,264	.87	215,095,354
84	583,628,000	.....	.277	161,528,470	.735	219,735,942
85	629,409,000	.....	.285	179,631,860	.758	236,972,489
86	624,134,000	.....	.298	186,137,930	.792	234 988,451
87	659,618,000	.....	.304	200,699,790	.808	248,346,177
88	701,735,000	.....	.2785	195,424,240	.739	264,203,228
89	751,515,000	.....	.2285	171,781,008	.607	282,943,398
1890	523,621,000	.....	.424	222,048,486	1.126	197,143,306
91	738,394,000	.....	.315	232,312,267	.836	278,005,341
92	661,035,000	.....	.3165	209,253,611	.841	248,879,678
93	638,854,850	.....	.294	187,576,092	.78	240,528,851
94	662,086,928	.....	.3245	214,816,920	.862	249,275,728
70–94	12,212,361,948	.....	.....	3,891,277,989	.846	4,597,954,277
	True average, Value of comm	odity	.319 unit=	.8473 ÷ .319 =	2.656	bu. Unit for Oats.
1895	d 824,443,537	.....	.199	163,655,068	.527	310,402,992
73–95	.....	.....	.....	3,788,562,960	.821	4,616,657,343

a From U. S. Statistical Abstract, 1894, page 285, unless otherwise noted.
b Direct from U. S. Agricultural Report, 1870.
c Computed.
d From U. S. Statistical Abstract, 1895, page 299.

TABLE 4.

Production and value of **Barley** in the United States. Gold Basis.

Year		Product in Bushels	Price per Bushel		Total Value of Crop in Dollars	Commodity Units	
			Currency $	Gold $		Price per Unit of 1.418 bu $	Number of Units in Crop
		a	a		a	c	c
1870	b	26,295,400	.846	.736	19,352,788	1.044	18,540,886
71		26,718,500	.844	.755	20,179,890	1.071	18,839,214
72		26,846,400	.739	.658	17,655,618	.933	18,929,397
70–72		79,860,300	.....	.716	57,188,296	1.016	56,309,497
73		32,044,491	.915	.805	25,784,172	1.141	22,594,571
74		32,552,500	.921	.828	26,955,408	1.178	22,952,768
75		36,908,600	.8114	.706	26,058,311	1.001	26,024,254
76		38,710,500	.665	.597	23,110,128	.847	27,294,774
77		34,441,400	.6395	.61	21,015,326	.865	24,284,631
78		42,245,630	.5795	.575	24,287,448	.812	29,787,394
79		40,283,100	.589	.589	23,714,444	.835	28,403,614
1880		45,165,346	.....	.666	30,090,742	.945	31,846,085
81		41,161,330	.....	.823	33,862,513	1.167	29,022,854
82		48,952,926	.....	.628	30,768,015	.891	34,516,708
83		50,136,097	.....	.587	29,420,423	.832	35,350,962
84		61,203,000	.....	.486	29,779,170	.69	43,154,235
85		58,360,000	.....	.563	32,867,696	.799	41,149,636
86		59,428,000	.....	.536	31,840,510	.759	41,902,683
87		56,812,000	.....	.5198	29,464,390	.736	40,058,141
88		63,884,000	.....	.5897	37,672,032	.836	45,044,608
89	d	.....	.....	.....	.....	.....	.....
1890	d	.....	.....	.....	.....	.....	.....
91	d	.....	.....	.....	.....	.....	.....
92	d	.....	.....	.....	.....	.....	.....
93		69,869,495	.....	.4111	28,729,386	.583	49,264,981
94		61,400,465	.....	.4419	27,134,127	.627	43,293,468
70–94		953,419,180	.....	.5975	569,742,537	.847	672,255,864
		True average..	.....	.5975			
		Value of commodity		unit=	.8473 ÷ .597 =	1.418	bu. Unit for Barley.
1895	e	87,072,744	.....	.337	29,312,413	.477	61,394,992
73–95		.....	.....	.....	541,866,654	.800	677,341,359

a From U. S. Statistical Abstract, 1894, page 286, unless otherwise noted.
b Direct from U. S. Agricultural Report, 1870.
c Computed.
d No record.
e From U. S. Statistical Abstract, 1895, page 300.

TABLE 5.

Production and Value of **Potatoes** in the United States. Gold Basis.

Year	Product in Bushels	Price per Bushel		Total Value of Crop in Dollars	Commodity Units	
		Currency $	Gold $		Price per Unit of 1.645 bu $	Number of Units in Crop
	a	*a*		*a*	*b*	*b*
1870	114,775,000	.72	.627	71,921,673	1.03	69,760,245
71	120,461,100	.5966	.534	64,293,820	.8782	73,216,257
72	113,516,000	.5995	.5338	60,592,197	.8782	68,995,024
70–72	348,752,100	.....	.564	196,807,690	.9287	211,971,526
73	106,089,000	.705	.62	65,727,128	1.019	64,480,894
74	105,981,000	.677	.6096	64,569,174	1.002	64,415,252
75	166,877,000	.388	.3391	56,566,895	.5578	101,427,840
76	124,877,000	.672	.6034	75,307,528	.9921	75,900,241
77	170,092,000	.4485	.4279	72,741,933	.7042	103,381,918
78	124,126,650	.5887	.5804	72,474,652	.9606	75,444,178
79	181,626,400	.436	.436	79,153,673	.717	110,392,526
1880	167,659,570	.....	.483	81,062,214	.795	101,903,487
81	109,145,494	.....	.910	99,291,341	.497	66,338,631
82	170,972,508	.....	.5576	95,304,844	.9172	103,917,089
83	208,164,425	.....	.422	87,849,991	.6944	126,522,338
84	190,642,000	.....	.396	75,524,290	.6522	115,872,208
85	175,029,000	.....	.447	78,153,403	.7352	106,382,626
86	168,051,000	.....	.467	78,441,940	.7683	102,141,398
87	134,103,000	.....	.682	91,506,740	1.123	81,507,803
88	202,365,000	.....	.402	81,413,589	.6624	122,997,447
89	*c*	.....	.....	.....	.....	.....
1890	*c*	.....	.....	.....	.....	.....
91	*c*	.....	.....	.....	.....	.....
92	*c*	.....	.....	.....	.....	.....
93	183,034,203	.....	.594	108,661,801	.9766	111,248,189
94	170,787,338	.....	.536	91,526,787	.8817	103,804,544
70–94	3,208,374,688	.....	.....	1,652,085,613	.8472	1,950,050,135
	True average, Value of commodity		.515 unit=	.8473 ÷ .515 =	1.645	bu. Unit for Potatoes.
1895	*d* 297,237,370	.....	.266	78,984,901	.437	180,660,873
73–95	.....	.....	.....	1,534,262,824	.800	1,918,739,482

a Direct from Agricultural Reports unless otherwise noted.
b Computed.
c No record.
d From U. S. Statistical Abstract, 1895, page 306.

TABLE 6.

Production and Value of **Hay** in the United States. Gold Basis.

Year	Product in Tons	Price per Ton		Total Value of Crop in Dollars	Commodity Units	
		Currency $	Gold $		Price per Unit of .088 ton $	Number of Units in Crop
	a	*a*		*a*	*b*	*b*
1870	24,525,000	13.82	12.03	294,903,622	1.062	277,843,725
71	22,230,400	15.82	14.16	314,786,746	1.25	251,848,202
72	23,812,800	14.53	12.93	307,912,480	1.142	269,775,211
70–72	70,568,200	.....	13.00	917,602,848	1.148	799,467,138
73	25,085,100	13.55	11.91	298,768,132	1.051	284,189,098
74	24,133,900	13.73	12.35	297,947,243	1.09	273,412,953
75	27,873,600	12.27	10.69	297,803,997	.943	315,780,014
76	30,867,400	9.75	8.76	270,209,324	.773	349,696,775
77	31,629,300	8.59	8.20	259,425,942	.724	358,328,340
78	39,608,296	7.21	7.15	283,259,402	.631	448,722,385
79	35,403,000	9.32	9.32	330,804,494	.822	401,080,587
1880	31,925,233	.....	11.65	371,811,084	1.028	361,680,965
81	35,135,064	.....	11.82	415,131,366	1.043	398,045,140
82	38,138,049	.....	9.70	369,958,158	.856	432,065,957
83	46,864,009	.....	8.19	383,834,451	.723	530,922,358
84	48,470,460	.....	8.17	396,139,309	.721	549,121,841
85	44,731,550	.....	8.71	389,752,873	.769	506,763,730
86	41,796,499	.....	8.46	353,437,699	.746	473,512,537
87	41,454,458	.....	9.97	413,440,283	.88	469,637,555
88	46,643,094	.....	8.76	408,499,565	.773	528,419,612
89	*c*.....	.....	.....	.....	.....	.....
1890	*c*.....	.....	.....	.....	.....	.....
91	*c*.....	.....	.....	.....	.....	.....
92	*c*.....	.....	.....	.....	.....	.....
93	65,766,158	.....	8.68	570,882,872	.766	745,064,804
94	54,874,408	.....	8.54	468,578,321	.746	621,672,168
70–94	780,967,778	.....	.....	7,497,287,363	.847	8,847,583,957
	True average, Value of commodity		9.60 unit=	.8473 ÷ 9.60 =	.0883	ton. Unit for Hay.
1895	*d* 47,078,541	.....	8.352	393,185,615	.737	533,352,791
73–95	.....	.....	.....	6,972,870,130	.813	8,581,469,610

a Direct from Agricultural Reports unless otherwise noted.
b Computed.
c No Record.
d From U. S. Statistical Abstract, 1895, page 306.

TABLE 7.

Production and value of **Tobacco** in the United States. Gold Basis.

Year	Product in Pounds	Price per Pound		Total Value of Crop in Dollars	Commodity Units	
		Currency $	Gold		Price per Unit of 1046 lbs	Number of Units
	a	*a*	$	*a*	*c*	*c*
1870	250,628,000	.106	.092	23,270,027	.97	23,960,037
71	263,196,100	.098	.088	23,181,772	.92	25,161,547
72	342,304,000	.104	.093	31,800,043	.972	32,724,262
70–72	856,128,100	.....	.0915	78,251,842	.956	81,845,846
73	372,810,000	.083	.073	27,131,189	.76	35,640,636
74	178,355,000	.131	.118	21,003,126	1.23	17,050,738
75	*b*.....	.....	.....	.....	.....	.....
76	381,002,000	.074	.066	25,398,105	.697	36,423,791
77	*b*.....	.....	.....	.....	.....	.....
78	392,546,700	.056	.056	21,960,328	.585	37,527,465
79	391,278,350	.058	.058	22,727,524	.607	37,406,210
1880	446,296,889	.....	.082	36,414,615	.8535	42,665,983
81	449,880,014	.....	.096	43,372,336	1.009	43,008,529
82	513,077,558	.....	.084	43,189,950	.88	49,050,215
83	451,545,641	.....	.0894	40,455,362	.937	43,167,763
84	541,504,000	.....	.0815	44,160,151	.8532	51,767,782
85	562,736,000	.....	.0768	43,265,598	.8042	53,797,562
86	532,537,000	.....	.074	39,468,218	.7751	50,910,537
87	386,240,000	.....	.106	40,977,259	1.11	36,924,544
88	565,795,000	.....	.077	43,666,665	.807	54,090,002
89	*b*.....	.....	.....	.....	.....	.....
1890	*b*.....	.....	.....	.....	.....	.....
91	*b*.....	.....	.....	.....	.....	.....
92	*b*.....	.....	.....	.....	.....	.....
93	483,023,963	.....	.081	39,155,442	.848	46,177,091
94	406,678,385	.....	.0682	27,760,739	.714	38,878,454
70–94	7,911,434,600	.....	.....	638,358,449	.844	756,333,148
	True Average Value of Commodity	.....	.081 unit=	.84736 ÷ .081=	10.46	lbs. Unit for Tobacco.
1895	*b*.....	.....	.....	.....	.....	.....
73–95	.....	.....	.....	560,106,607	.830	674,487,302

a From 1870 to 1880, from the Annual Agricultural Reports, from 1881 to 1894 inclusive, from U. S. Statistical Abstract, page 291.

b No Statistics on record or accessible.

c Computed.

TABLE 8.

Production and value of **Cotton** in the United States. Gold Basis.

Year	Product in Pounds	Price per Pound		Total Value of Crop in Dollars	Commodity Units	
		Currency	Gold $		Price per Unit of 8.92 lbs $	Number of Units
	a	$	*b*	*a*	*c*	*c*
1870	*d* 954,100,000	.235	.2044	194,967,000	1.823	106,954,610
71	*d* 1,459,700,000	.1486	.133	194,125,500	1.186	163,632,370
72	1,384,084,494	.2082	.1853	256,587,000	1.654	155,155,872
70–72	3,797,884,494	.....	.17	645,679,500	1.517	425,742,852
73	1,833,188,931	.1642	.1444	264,655,912	1.288	205,500,479
74	1,940,648,352	.1611	.1448	280,919,520	1.291	217,546,680
75	1,783,644,032	.1437	.125	222,907,050	1 115	199,946,496
76	2,157,958,142	.1261	.1133	244,316,587	1.015	241,907,108
77	2,095,901,297	.109	.104	217,972,370	.927	234,950,535
78	2,260,285,666	.0907	.0899	203,360,000	.803	253,378,023
79	2,404,410,373	.0806	.0806	193,854,641	.719	269,534,403
1880	2,771,797,156	.....	.0874	242,140,987	.779	310,718,461
81	3,199,822,682	.....	.0876	280,266,242	.781	358,700,123
82	2,588,240,050	.....	.1001	259,016,315	.893	290,141,710
83	3,405,070,410	.....	.0909	309,696,500	.811	381,708,393
84	2,757,544,422	.....	.0908	250,594,750	.81	309,120,730
85	2,742,966,011	.....	.0926	253,993,385	.826	307,486,490
86	3,182,305,659	.....	.0845	269,989,812	.757	356,736,464
87	3,157,378,443	.....	.0815	257,295,327	.727	353,942,123
88	3,439,172,391	.....	.0846	291,045,346	.755	385,531,225
89	3,439,934,799	.....	.0849	292,139,209	.757	385,616,691
1890	3,627,366,183	.....	.085	308,424,271	.758	406,627,749
91	4,316,043,982	.....	.081	350,000,000	.723	483,828,530
92	4,506,575,984	.....	.069	313,000,000	.6197	505,187,168
93	3,352,658,458	.....	.080	268,000,000	.713	375,833,013
94	3,769,381,478	.....	.070	263,857,000	.624	422,547,664
70–94	68,530,179,395	.....	.....	6,483,124,724	.844	7,682,233,109
	True average.. Value of comm	..... odity	.095 unit=	.84736 ÷ .095=	8.92	lbs. Unit for Cotton.
1895	*e* 5,036,964,409	.....	.052	262,426,000	.465	564,643,710
73–95	.....	.....	.....	6,099,871,224	.780	7,821,133,967

a From U. S. Statistical Abstract, 1894, page 267.
b Computed from amount and value.
c Computed.
d From Agricultural Reports. Values reduced to gold.
e From U. S. Statistical Abstract, 1895, page 285.

TABLE 9.

Production and Value of **Wool** in the United States. Gold Basis.

Year	Product in Pounds	Price per Pound		Total Value of Crop in Dollars	Commodity Units	
		Currency $	Gold $		Price per Unit of 2.38 lbs. $	Number of Units
	a	*b*	*b*	*c*	*c*	*c*
1870	162,000,000	.446	.388	62 856,000	.923	68,056,200
71	160,000,000	.59	.528	84 480,000	1.257	67 216,000
72	150,000,000	.69	.614	92,100,000	1.462	63,015,000
70–72	472,000,000	.....	.507	239,436,000	1.208	198,287,200
73	158,000,000	.473	.416	65,728,000	.99	66,375,800
74	170,000,000	.507	.456	77,520,000	1.086	71,417,000
75	181,000,000	.49	.426	77,106,000	1.014	76,038,100
76	192,000,000	.347	.312	59,904,000	.743	80,659,200
77	200,000,000	.437	.416	83 200,000	.99	84,020,000
78	208,250,000	.347	.344	71 638,000	.819	87,485,825
79	211,000,000	.363	.363	76,593,000	.864	88 641,100
1880	232,500,000	.....	.453	105,322,500	1.078	97,673,250
81	240,000 000	.....	.406	97 440,000	.967	100 824,000
82	272,000,000	.....	.403	109 616,000	.959	114 267,200
83	290,000,000	.....	.376	109,040,000	.895	121,829,000
84	300 000,000	.....	.33	99,000,000	.786	126,030,000
85	308,000,000	.....	.303	93 324,000	.722	129,390,800
86	302,000,000	.....	.316	95,432 000	.753	126,870 200
87	285,000,000	.....	.35	99,750 000	.833	119,728,500
88	269 000,000	.....	.31	83,390,000	.738	113,006,900
89	265,000,000	.....	.353	93,345,000	.839	111,326,500
1890	276,000,000	.....	.33	91,080,000	.785	115 947,600
91	285,000,000	.....	.316	90,060,000	.752	119,728,500
92	294,000,000	.....	.306	89,964,000	.728	123,509,400
93	303,153,000	.....	.25	75,788,250	.595	127 354,575
94	298,057,384	.....	.196	58,419,247	.466	125,213,907
70–94	6,011,960,384	.....	.....	2,142,095,997	.848	2,525,624,557
	True average, Value of comm	odity	.356 unit=	.84736 ÷ .356=	2.380	lbs. Unit for Wool.
1895	*d* 309,748,000	.....	.193	59,781,364	.459	130,125,135
73–95	.....	.....	.....	1,962,441,361	.799	2,457,462,492

a From U. S. Statistical Abstract, 1894, page 273.

b Average of prices given for the three grades of washed Ohio fleece wool for month of July of each year. See U. S. Statistical Abstract, 1894, page 409.

c Computed.

d From U. S. Statistical Abstract, 1895, pp. 292 and 375.

TABLE 10.

Number and Value of **Horses** in the United States. Gold Basis.

On Jan. 1st	Number of Animals	Price per Head		Value in Dollars	Commodity Units	
		Currency $	Gold $		Price pr. Unit of .0132 horse $	Number of Units
	a	*b*	*b*	*a*	*b*	*b*
1870	8,248,800	93 36	81.38	584,047,931	.931	625 588,992
71	8,702,000	62.37	55.82	611,515 540	.927	659 959,680
72	8,990,900	73.35	65.31	587,140,045	.861	681,869,856
70–72	25,941,700	.....	68.72	1,782,703,516	.906	1,967,418,528
73	9,222,470	74.22	65 23	601,643,818	.86	699.432,125
74	9,333,800	71.45	64.23	599,567,737	.847	707.875,392
75	9,504,200	68.01	59.16	562,342,716	.78	720.798,528
76	9,735.300	64.96	58.34	567 937,392	.769	738.325,152
77	10.155,400	60.11	57.35	582,137,125	.756	770,185,536
78	10.329,700	58.22	57.75	596.007,171	.76	783.404 448
79	10.938,700	52.40	52.40	573,254,808	.69	829.591,008
1880	11,201,800	.....	54.75	613.296,611	.722	849.544,512
81	11,429.626	.....	58.48	667,954,325	.771	866.822,836
82	10.521,554	.....	58.54	615.824,914	.772	797.954,655
83	10,838,111	.....	70.64	765.041,308	.93	821.962,338
84	11,169 683	.....	74.71	833.734,400	.984	847 108,759
85	11,564.572	.....	73.72	852,282 947	.972	877.057,140
86	12.077,657	.....	71.32	860 823,208	.94	915 969.507
87	12.496.744	.....	72 19	901 685,755	.951	947.753,065
88	13,172.936	.....	71.83	946.096,154	.947	999 035,466
89	13.663,294	.....	71.90	982 194.827	.948	1.036 224.217
1890	14.213,837	.....	68.86	978 516,562	.907	1.077.977.398
91	14,056.750	.....	67.03	941 823,222	.883	1 066 063 920
92	15.498.140	.....	65.01	1,007.593,636	.857	1.175 378.938
93	16.206,802	.....	61.25	992 225,185	.807	1.229.123 864
94	16,081,139	.....	47.84	769.224,799	.631	1.219.593,582
70–94	289,353,915	.....	.....	18,593,912,136	.847	21,944,600,914
	True average..	.....	64.26			
	Value of comm	odity	unit=	.84736÷64.26=	.0132	ani. Unit for horses.
1895	*c* 15,893,318	.....	36.29	576,730,580	.479	1,205.349,237
73–95	.....	.....	.....	17,387,939,200	.821	21,182,531,623

a From Report of the Statistician, Department of Agriculture, January and February, 1895, page 5.

b Computed.

c From U. S. Statistical Abstract, 1895, page 307.

TABLE 11.

Number and Value of **Mules** in the United States. Gold Basis.

On Jan. 1st	Number of Animals	Price per Head		Value in Dollars	Commodity Units	
		Currency $	Gold $		Price pr. Unit .0113 Mule $	Number of Units
	a	*b*	*b*	*a*	*b*	*b*
1870	1,179,500	109.00	94.83	111,868,772	1.07	104,550,880
71	1,242,300	101.50	90.82	112,884,368	1.025	110,117,472
72	1,276,300	94.84	84.41	107,714,311	.952	113,131,232
70–72	3,689,100	.....	89.90	332,467,451	1.014	327,799,584
73	1,310,000	95.09	83.59	109,574,456	.943	116,118,400
74	1,339,350	89.22	80.21	107,432,171	.905	118,719,984
75	1,393,750	80.04	69.63	97,007,360	.785	123,542,000
76	1,414,500	75.36	67.67	95,695,472	.764	125,381,280
77	1,443,500	68.94	65.77	94,904,851	.742	127,951,840
78	1,637,500	63.67	63 16	103,488,355	.713	145,148,000
79	1,713,100	.....	56.06	96,033,971	.633	151,849,184
1880	1,729,500	.....	61.25	105,948 319	.691	153,302,880
81	1,720,731	.....	69.77	120,096,164	.787	152,225,596
82	1,835,166	.....	71.34	130 945,378	.805	162,669,114
83	1,871,079	.....	79.45	148,732,390	.897	165,852,443
84	1,914,126	.....	84.22	161,214,976	.950	169,668,128
85	1,972,569	.....	82.35	162,497,097	.929	174,848,516
86	2 052,593	.....	79.58	163,381,096	.898	181,941,844
87	2,117,141	.....	78.89	167,057,538	.89	187 663 378
88	2,191,727	.....	79.78	174,853,563	.90	194 274,681
89	2,257,574	.....	79.49	179 444,481	.896	200,111,359
1890	2,331,027	.....	78.21	182,394,099	.882	206,622,233
91	2,296,532	.....	77.88	178,847,370	.879	203 564,596
92	2,314,699	.....	75.54	174 882,070	.852	205,174,919
93	2,331,128	.....	70.66	164,763,751	.797	206,631,186
94	2,352,231	.....	62.16	146,232,811	.701	208,501,756
70–94	45,237,623	.....	.....	3,397,895,190	.847	4,009,862,963
	True Average Value of Comm	..... odity	75.11 unit=	.8473 ÷ 75.11=	.0113	ani. Unit for Mules.
1895	*c* 2,333,108	.....	47.54	110,927,834	.536	206,806,693
73–95	.....	.....	.....	3,176,355,573	.817	3,888,870,012

a From Report of the Statistician, Department of Agriculture, January and February, 1895, page 5.

b Computed.

c From U. S. Statistical Abstract, 1895, page 307.

TABLE 12.

Number and Value of **Milch Cows** in the United States. Gold Basis.

On Jan. 1st	Number of Animals	Price per Head		Value in Dollars	Commodity Units	
		Currency	Gold		Price pr. Unit .0332 Cow	Number of Units
	a	$ *b*	$ *b*	*a*	$ *b*	*b*
1870	10,095,600	39.13	34.04	343,598,448	1.129	304,382,340
71	10,023,000	37.33	33.41	334,890,288	1.108	302,193,450
72	10,303,500	31.97	28.46	293,173,995	.944	310,650,525
70–72	30,422,100	.....	31.94	971,662,731	1.059	917,226,315
73	10,575,900	29.74	26.14	276,321,500	.867	318,863,385
74	10,705,300	28.00	25.17	269,348,769	.834	322,764,795
75	10,906,800	28.54	24.83	270,648,147	.823	328,840,020
76	11,085,400	28.90	25.96	287,671,362	.861	334,224,810
77	11,260,800	27.32	26.07	293,587,023	.864	339,513,120
78	11,300,100	26.42	26.20	296,111,867	.869	340,698,015
79	11,826,400	.....	21.73	256,953,928	.721	356,565,960
1880	12,027,000	.....	23.27	279,899,420	.771	362,614,050
81	12,368,653	.....	23.96	296,277,060	.794	372,914,888
82	12,611,632	.....	25.88	326,480,310	.859	380,240,705
83	13,125,685	.....	30.22	396,575,405	1.002	395,739,402
84	13,501,206	.....	31.36	423,486,649	1.04	407,061,361
85	13,904,722	.....	29.70	412,903,093	.985	419,227,368
86	14,235,388	.....	27.40	389,985,523	.909	429,196,948
87	14,522,083	.....	26.08	378,789,589	.865	437,840,802
88	14,856,414	.....	24.66	366,252,173	.818	447,920,882
89	15,298,625	.....	23.95	366,226,376	.794	461,253,544
1890	15,952,883	..	22.08	352,152,133	.732	480,979,422
91	16,019,591	.....	21.63	346,397,900	.717	482,990 669
92	16,416,351	.....	21.41	351,378,132	.71	494,952,983
93	16,424,087	.....	21.75	357,299,785	.721	495,186,223
94	16,487,400	.....	21.78	358,998,661	.722	497,095,110
70–94	325,834,520	.....	.....	8,325,407,536	.847	9,823,910,777
	True average, Value of comm	odity	25.55 unit=	.84736÷25.55=	.0332	cow. Unit for Cows.
1895	*c* 16,504,629	.....	21.98	362,601,729	.729	497,614,564
73–95	.....	.....	.....	7,716,346,534	.821	9,404,299,026

a From Report of the Statisticion, Department of Agriculture, January and February, 1895, page 5.

b Computed.

c From U. S. Statistical Abstract, 1895, page 307.

TABLE 13.

Number and Value of **Oxen** and Other Cattle in U. S. Gold Basis.

On Jan. 1st	Number of Animals	Price per Head		Value in Dollars	Commodity Units	
		Currency $	Gold $		Price pr. Unit .048 Ox $	Number of Units
	a	*b*	*b*	*a*	*b*	*b*
1870	15,388,500	22.55	19 62	301,826,003	.944	319,619,145
71	16.212,200	22.81	20.42	331,096,350	.983	336,727,394
72	16,389,800	19.63	17.47	286,190,797	.841	340,416,146
70–72	47,990,500	.....	19.15	919,113,150	.922	996,762,685
73	16,413,800	20.06	17.64	289,453,606	.849	340.914,626
74	16,218,100	19.16	17.22	279,274,173	.829	336 849,937
75	16,313,400	18.69	16.26	265,227,207	.783	338 829,318
76	16,785,300	19.05	17.10	287,021 911	.823	348 630,681
77	17,956,100	17.10	16.32	292,978,538	.785	372,948,197
78	19,223,300	17.54	17.01	326,905,369	.819	399,267,941
79	21,408,100	15.40	15.39	329,543,327	.741	444,646.237
1880	21,231,000	.....	16.10	341,761,154	.775	440,967.870
81	20,937,702	.....	17.33	362,861,509	.834	434,876.071
82	23,280,238	.....	19.89	463,069,499	.958	483,530,543
83	28,046.077	.....	21.80	611,549,109	1.05	582,517.019
84	29.046,101	.....	22.83	683,229,054	1.133	603,287,518
85	29,866,573	.....	23.25	694,382,913	1.119	620.328.721
86	31,275,242	.....	21.16	661,956,274	1.019	649,586,776
87	33,511,750	.....	19.79	663,137,926	.953	696,039,048
88	34,378,363	.....	17.79	611,750,520	.857	714,038,600
89	35,032,417	.....	17.05	597,236,812	.821	727,623,301
1890	36,849,024	.....	15.21	560,625,137	.732	765.354,228
91	36,875,648	.....	14.75	544,127,908	.71	765.907,209
92	37,651,239	.....	15.16	570,749,155	.729	782.016,234
93	35,954,196	.....	15.24	547 882,204	.734	746,768,651
94	36,608,168	.....	14.66	536,789,747	.706	760,351,649
70–94	642,852,338	.....	.....	11,440,626,202	.857	13,352,043,060
	True average..	.....	17.60			
	Value of comm	odity	unit=	.8473÷17.60=	.0482	ox. Unit for Oxen.
1895	34,364,216	.....	14.57	482,999,129	.677	713,744,766
73–95	.....	.....	.....	11,004,512,181	.842	13,069,025,141

a From Report of the Statistician, Department of Agriculture, January and February, 1895, page 5.

b Computed.

c From U. S. Statistical Abstract, 1895, page 308.

TABLE 14.

Number and value of **Sheep** in the United States. Gold Basis.

On Jan. 1st	Number of Animals	Price per Head		Value in Dollars	Commodity Units	
		Currency $	Gold $		Price pr. Unit of .3774 Sheep $	Number of Units
	a	*b*	*b*	*a*	*b*	*b*
1870	40,853,000	2.286	1.988	81,227,057	.751	108,219,597
71	31,851,000	2.324	2.080	66,262,974	.785	84,373,299
72	31,679,300	2.803	2.49	79,006,365	.941	83,918,466
70–72	104,383,300	.....	2.169	226,496,396	.819	276,511,362
73	33,002,400	2.967	2.61	86,073,746	.985	87,423,357
74	33,928,200	2.615	2.35	79,732,822	.887	89,875,802
75	33,783,600	2.792	2.43	82,058,967	.917	89,492,756
76	35,935,300	2.607	2.34	84,112,354	.884	95,192,610
77	35,804,200	2.26	2.155	77,171,620	.814	94,845,326
78	35,740,500	2.255	2.24	79,958,237	.845	94,676,585
79	38,123,800	.....	2.07	79,023,984	.783	100,989,946
1880	40,765,900	.....	2.21	90,230,537	.856	107,988,869
81	43,576,899	.....	2.39	104,070,759	.901	115,435,205
82	45,016,224	.....	2.37	106,594,954	.894	119,247,977
83	49,237,291	.....	2.52	124,565,835	.953	130,429,584
84	50,626,626	.....	2.37	119,902,706	.894	134,109,932
85	50,360,243	.....	2.14	107,960,650	.809	133,404,284
86	48,322,331	.....	1.91	92,443,867	.722	128,005,855
87	44,759,314	.....	2.01	89,872,839	.758	118,567,423
88	43,544,755	.....	2.05	89,279,926	.774	115,350,056
89	42,599,079	.....	2.13	90,640,369	.804	112,844,960
1890	44,336,072	.....	2.27	100,659,761	.857	117,446,255
91	43,431,136	.....	2.49	108,397,447	.942	115,049,079
92	44,938,365	....	2.58	116,121,290	.976	119,041,729
93	47,273,553	.....	2.66	125,909,264	1.006	125,227,642
94	45,048,017	.....	1.98	89,186,110	.747	119,332,197
70–94	1,034,537,105	.....	.....	2,350,264,440	.857	2,740,488,791
	True average.. Value of commodity	.....	2.245 unit=	.8473 ÷ 2.245=	.3774	ani. Unit for Sheep.
1895	42,294,064	.....	1.577	66,685,767	.595	112,036,976
73–95	.....	.....	.....	2,190,453,811	.850	2,576,014,405

a From Reports of the Statistician, Department of Agriculture, January and February, 1895, page 5.

b Computed.

c From U. S. Statistical Abstract, 1895, page 308.

TABLE 15.

Number and value of **Swine** in the United States. Gold Basis.

On Jan. 1st	Number of Animals	Price per Head		Value in Dollars	Commodity Units	
		Currency $	Gold $		Price pr. Unit of .1686 animal $	Number of Units
	a	*b*	*b*	*a*	*b*	*b*
1870	26,751,400	6.995	6.086	162,856,607	1 026	158,716,056
71	29,457,500	6.199	5.548	163,429,105	.935	174,771,348
72	31,796,300	4.362	3.882	123,473,107	.654	188,647,448
70–72	88,005,200	.....	5.11	449,758,819	.861	522,134,852
73	32,632,050	4.09	3.595	117,368,331	.606	193,605,953
74	30,860,900	4.358	3.918	120,974,108	.661	183,097,719
75	28,062,200	5.337	4.644	130,386,234	.783	166,493,033
76	25,726,800	6.806	6.112	157,213,295	1.03	152,637,104
77	28,077,100	6.094	5.814	163,207,645	.98	166,581,434
78	32,262,500	4.984	4.944	159,551,824	.833	191,413,413
79	34,766,100	3.182	3.182	110,613,044	.536	206,267,271
1880	34,034,100	.....	4.282	145,781,515	.722	201,924,315
81	36,247,603	.....	4.705	170,535,435	.793	215,057,029
82	44,122,200	.....	5.972	263 543,195	1.007	261,777,012
83	43,270,086	.....	6.746	291,951,221	1.137	256,721,420
84	44,200,893	.....	5.572	246,301,139	.939	262,243,899
85	45,142,657	.....	5.016	226 401,683	.845	267,831,384
86	46 092,043	.....	4.263	196,569,894	.719	273,464,091
87	44,612,836	.....	4.483	200.043,291	.756	264,687,956
88	44,346,525	.....	4.98	220,811,082	.839	263.107,933
89	50,301,592	.....	5.791	291,307,193	.976	298,439,345
1890	51,602,780	.....	4.717	243.418,336	.795	306,159,294
91	50,625,106	.....	4.151	210,193,923	.699	300.358,754
92	52,398,019	.....	4.60	241,031,415	.775	310,877,447
93	46,094,807	.....	6.409	295,426,492	1.08	273,480,490
94	45,206,498	.....	5.98	270.384,626	1.008	268,210,152
70–94	978,690,595	.....	.....	4,922,774,040	.848	5,806,571,300
	True average..	.....	5.027			
	Value of comm	odity	unit=	.84736÷5.027=	.1686	ani. Unit for Swine.
1895	44,165,716	.....	4.97	219,501,267	.833	262,035,193
73–95	.....	.....	.....	4,692,516,488	.846	5,546,471,641

a From Report of the Statistician, Department of Agriculture, January and February, 1895, page 5.

b Computed.

c From U. S. Statistical Abstract, 1895, page 308.

TABLE 16.

Production and value of **Pig Iron** in the United States. Gold Basis.

Year		Product in Tons (2240 Pounds)	Price per Ton		Total Value of Product in Dollars	Commodity Units	
			Currency	Gold		Price pr. Unit of .0415 ton	Number of Units
		a	$ b	$ b	d	$ d	d
1870	c	1,665,000	33.25	28.93	48,168,450	1.201	40,109,850
71	c	1,704,000	35.12	31.43	53,556,720	1.305	41,049.360
72	c	2,549,000	48.88	43.47	110,881,500	1.805	61,405,410
70–72		5,918,000	.....	35.92	212,606,670	1.492	142,564,620
73	c	2,562,000	42.75	37.58	96.279,960	1.56	61,718,580
74		2,401,262	30.25	27.19	65,290.314	1.129	57,846,402
75		2,023,733	25.50	22.16	44 886,398	.921	48,751,728
76		1,868,961	22.25	19.99	37,341,841	.829	45,023,270
77		2,066,594	18.88	18.01	37,219,358	.747	49,784,250
78		2,301,215	17.63	17.49	40,248,250	.726	55,436,269
79		2,741,853	21.50	21.50	58 049,840	.879	66,051,239
1880		3,835,191	.....	28.50	109,302,944	1.183	92,389,751
81		4,144,254	.....	25.12	104,103,660	1.043	99,835,079
82		4,623,323	.....	25.75	119.050,567	1.069	111,375,851
83		4,595,510	.....	22.38	102,847,514	.929	110,705,836
84		4,097,868	.....	19.88	81,465,616	.825	98,717,640
85		4,044,526	.....	18.00	72,801,468	.747	97.432.631
86		5,683,329	.....	18.71	106,335,086	.777	136,911,396
87		6,417,148	.....	20.92	134.246,736	.869	154,589,095
88		6,489,738	.....	18.88	122.526,253	.784	156,337,788
89		7,603,642	.....	17.75	134.964,645	.737	183,171,736
1890		9,202,703	.....	18.40	169,329,735	.764	221,693,116
91		8,279,870	.....	17.52	145,063,322	.727	199,462,068
92		9,157,000	.....	15.75	144,222,750	.654	220,592,130
93		7,124,502	.....	14.52	103,447,769	.603	171,629.253
94	e	7,000,000	.....	12.66	88,620,000	.526	168,630,000
70–94		114,182,222	.....	.....	2,330,250,696	.847	2,750,649,728
		True average.. Value of comm	..... odity	20.41 unit=	.84736÷20.41=	.0415	ton. Unit for Pig Iron.
1894	f	6,657,388	.....	12.66	84,282,532	.526	160,376,477
95		9,446,308	.....	13.10	123,746,634	.544	227,561,560
73–95		.....	.....	.....	2,237,053,192	.791	2,827,393,145

a From U. S. Statistical Abstract, 1894, page 274, unless otherwise noted.
b From U. S. Statistical Abstract, 1894, page 412. Prices of No. 1 Anthracite iron at Philadelphia, the prices from 1870 to 1878 inclusive reduced to gold basis. The prices are presumably based upon the long ton.
c From Mineral Industry, Vol. II, page 354, reduced to long ton.
d Computed.
e Estimated. Actual return not received.
f Revised figures.

TABLE 17.

Production and value of **Copper** in the United States.
Gold Basis.

Year	Product in Pounds	Price per Pound		Total Value in Dollars	Commodity Units	
		Currency $	Gold $		Price per Unit of 6.419 lb $	Number of Units
	a	*b*	*b*	*c*	*d*	*d*
1870	28,224,000	.206	.179	5,063,386	1.15	4,397,299
71	29,120,000	.226	.203	5,-96,800	1.30	4,536 896
72	28,000,000	.33	.294	8,223,600	1.885	4,362,400
70–72	85,344,000	.....	.225	19,183,786	1.443	13,296,595
73	34,720 000	.29	.255	8,850,128	1.636	5,409,376
74	39,200,000	.232	.209	8,192,800	1.341	6,107,360
75	40,320,000	.225	.196	7,894,656	1.257	6,281,856
76	42,560,000	.21	.189	8,026,816	1.211	6,630,848
77	47,040,000	.186	.178	8,359,008	1.141	7,328.832
78	48,160,000	.165	.164	7,883,792	1.051	7,503,328
79	51,520,000	.171	.171	8,809,920	1.098	8,026,816
1880	60,480,000	.....	.19	11,491,200	1.22	9,422,784
81	71,680,000	.....	.17	12,175,600	1.09	11,167,744
82	91,646,232	.....	.174	16,038,091	1.123	14.278,483
83	117,151,795	.....	.154	18,064.807	.989	18,252,250
84	145,221,934	.....	.122	17,789,687	.786	22,625,577
85	170,962,607	.....	.107	18,292,999	.687	26 635,974
86	161,235,381	.....	.103	16,527,651	.658	25,120,472
87	185,227,331	.....	.114	21,115.916	.732	28,858,418
88	231,270,662	.....	.146	33,833,954	.939	36,031,969
89	231,246,214	.....	.116	26,907,809	.747	36 028,160
1890	265,115,133	.....	.116	30,848,797	.747	41,304,938
91	295,810,076	.....	.13	38,455,300	.834	46,087,210
92	353,275,742	.....	.107	37,977,142	.69	55,040,361
93	337,416,848	.....	.095	32,054,601	.61	52,569,545
94	.....	.....	.....	.....	.....	.....
70–94	3,106,603,955	.....	.....	408,774,460	.845	484,008,896
	True average.. Value of comm	odity	.132 unit=	.84736 ÷ .132 =	6.419	lbs. Unit for Copper.
1894	360,844,218	.....	.092	33,141,142	.589	56.219 529
95	381,106,868	.....	.102	38,682,346	.651	59,376,450
73–95	.....	.....	.....	461,414,162	.787	586,308,280

a From 1870 to 1880 "Mineral Resources" 1883, page 215, reduced to pounds. From 1880 to 1893 inclusive, from Mineral Resources, 1893.

b To 1880 from Mineral Industry, Vol. II, Page 253, Lake Copper at N. Y., and from 1880 computed from amounts and values given in Mineral Resources.

c Computed to 1880. Below 1880 from Mineral Resources.

d Computed.

TABLE 18.

Production and value of **Silver** in the United States. Gold Basis.

Year		Product in Troy Ounces	Price per Oz. Gold Commerc al Value $	Commercial Value in Dollars	Commodity Units	
					Price per Unit of .8140 oz $	Number of Units
		a	*b*	*c*	*c*	*c*
1870		12,375,360	1.328	16,434,478	1.081	15,209,317
71		17,789,465	1.326	23,588,831	1.079	21,863,250
72		22,254,002	1.322	29,419,791	1.075	27,350,168
70–72		52,418,827	1.325	69,443,100	1.078	64,422,737
73		27,665,712	1.298	35,910,094	1.056	34,001,160
74		28,865,418	1.278	36,890,004	1.04	35,475,599
75		24,533,993	1.246	30,569,355	1.013	30,152,277
76		30,010,054	1.156	34,691,622	.941	36,882,356
77		30,783,509	1.201	36,970,994	.977	37,832,933
78		34,960,000	1.152	40,273,920	.937	42,965,840
79		31,550,000	1.123	35,430,650	.913	38,774,950
1880		30,320,000	1.145	34,716,400	.932	37,263,280
81		33,260,000	1.138	37,849,880	.926	40,876,540
82		36,200,000	1.136	41,123,200	.924	44,489,800
83		35,730,000	1.11	39,660,300	.903	43,912,170
84		37,800,000	1.113	42,071,400	.906	46,456,200
85		39,910,000	1.065	42,504,150	.867	49,049,390
86		39,685,513	.995	39,487,085	.809	48,773,495
87		41,721,592	.978	40,803,717	.796	51,275,837
88		45,792,682	.939	42,999,328	.764	56,279,206
89	*d*	51,354,839	.935	48,016,774	.761	63,115,097
1890		54,517,440	1.046	57,025,242	.851	67,001,934
91		58,331,314	.988	57,631,338	.804	71,689,185
92	*e*	65,000,000	.871	56,615,000	.709	79,885,000
93		60,500,000	.78	47,190,000	.635	74,354,500
94	*f*	45,230,000	.635	28,721,050	.517	55,587,670
70–94		936,140,893	.....	976,594,603	.847	1,150,517,156
		True average.. Value of comm	1.041 odity unit=	.84736÷1.041=	81.40	oz. Unit for Silver.
1894	*g*	49,846,875	.635	31,652,766	.517	61,261,809
95	*h*	47,000,000	.654	30,738,000	.532	57,763,000
73–95		....	.....	940,821,219	.818	1,149,531,558

a From Mineral Industry, Vol. II, page 313.
b From U. S. Statistical Abstract, 1894, page 34. Same 1895, page 42.
c Computed.
d As compiled for Eleventh Census.
e As compiled for Mineral Industry. All quantities, except *d* and *e* agree nearly with the estimate of the director of the mint.
f Wells, Fargo & Co's estimate.
g Corrected for 1894, Mineral Industry.
h From Mineral Resources.

TABLE 19.

Production and value of **Anthracite Coal** in the United States. Gold Basis.

Year	Product in Tons 2000 lbs.	Price per Ton		Total Value of Product in Dollars	Commodity Units	
		Currency $	Gold $		Price pr Unit of .2407 ton $	Number of Units
	a	*b*	*b*	*c*	*c*	*c*
1870	15,650,275	3.92	3.41	53,367,438	.821	65,011,242
71	19,464,877	3.98	3.565	69,392,286	.858	80,857,099
72	24,734,172	3.34	2.97	73,160,791	.712	102,745,750
70–72	59,849,324	.....	3 27	195,920,515	.788	248,614,091
73	25,626,631	3.81	3.35	85,849,214	.807	106,453,026
74	24,267,472	4.06	3.65	88,576,273	.879	100,807,079
75	23,120,730	3.92	3.41	78,841,689	.821	96,043,512
76	20,721,132	3.45	3.10	64,235,509	.743	86,075,582
77	23,327,560	2.31	2.205	51,437,270	.531	96,902,684
78	19,717,893	2.875	2.87	55,690,353	.68	81,908,128
79	29,279,811	2.41	2.41	70,564,345	.58	121,628,335
1880	26,249,711	.....	4.04	106,048,832	.973	109,041,299
81	31,920,018	.....	4.04	128,956,873	.973	132,595,755
82	32,614,507	.....	4.12	134,371,769	.992	135,480,662
83	35,418,353	.....	4.05	143,444,330	.975	147,127,838
84	36,558,478	.....	3.95	144,405,988	.951	151,863,918
85	38,335,973	.....	3.66	140 309,661	.881	159,247,632
86	39,035,446	.....	3.57	139,356,542	.859	162,153,243
87	42,088,196	.....	3.62	152,359,270	.871	174,834,366
88	46,619,564	.....	3.76	175,289,561	.905	193,657,669
89	39,656,635	.....	3.61	143,160,452	.869	164,733,662
1890	46,468,640	.....	3.505	162,872,583	.844	193,030,731
91	50,665,431	.....	3.44	174,289,083	.828	210,464,200
92	52,472,504	.....	3.55	186,277,389	.854	217,970,782
93	53,810,214	.....	3.48	187,259,545	.838	223,527,629
94	*d* 53,810,214	.....	3.48	*d* 187,259,545	.838	223,527,629
70–94	851,634,437	.....	.....	2,996,776,591	.847	7,537,689,451
	True Average.. Value of Comm	..... odity	3.52 unit=	.84736 ÷ 3.52=	.2407	ton. Unit for Ant. Coal.
1894	*e* 52,010,433	.....	3.48	180,996,307	.838	216,051,339
95	*f* 51,785,122	.....	3.13	162,087,432	.753	215,115,397
73–95	.....	.....	.....	2,956,680,270	.846	3,496,714,467

a From Mineral Industry, Vol. II, page 218.
b From U. S. Statistical Abstract, 1894, reduced to short tons. Prices at Philadelphia.
c Computed.
d Estimated. Return not received.
e Revised from Mineral Industry, Vol. III, page 130.
f From Mineral Resources Sheet, 1895.

TABLE 20.

Production and Value of **Bituminous Coal** in the United States. Gold Basis.

Year	Product in Tons 2,000 lbs.	Price per Ton		Value in Dollars	Commodity Units	
		Currency $	Gold $		Price per Unit of .3336 ton	Number of Units
	a	*b*	*b*	*c*	*c*	*c*
1870	17,353,040	4.215	3 67	63,685,657	$1.224	52,024,414
71	19,843,933	4.215	3 67	72,827,234	1.224	59,492,111
72	25,675,866	4.16	3.70	95,000,704	1.234	76,976,246
70–72	62,872,839	.....	3.68	231,513,595	1.229	188,492,771
73	29,474,307	4.32	3.80	112,002,367	1.268	88,363,972
74	27,369,533	4.02	3.61	98,804,014	1.204	82,053,860
75	30,000,299	3.88	3.38	101,401,011	1.127	89,940,896
76	30,607,085	3.455	3.10	94,881,963	1.034	91,760,041
77	34,044,429	2.81	2.68	91,239,070	.894	102,065,198
78	34,787,541	2.55	2.53	88,012,479	.845	104,293,048
79	38,909,819	2.49	2.49	96,885,449	.831	116,651,637
1880	47,398,286	.....	3.35	158,784,258	1.117	142,100,061
81	56,327,412	.....	3.35	188,696,830	1.117	168,869,581
82	65,588,241	.....	3.13	205,291,194	1.044	196,633,547
83	72,663,765	.....	2.59	188,199,151	.864	217,845,967
84	73,836,730	.....	2.23	164,655,908	.744	221,362,516
85	74,273,838	.....	2.01	149,290,414	.67	222,672,966
86	75,624,846	.....	1.875	141,796,586	.625	226,723,288
87	88,887,109	.....	3.08	273,772,296	1.027	266,483,553
88	98,850,642	.....	2.32	229,333,489	.773	296,354,225
89	98,460,067	.....	2.32	228,427,355	.774	295,183,281
1890	109,604,971	.....	2.32	254,283,533	.774	328,595,703
91	118,878,517	.....	2.32	275,798,159	.774	356,397,794
92	127,926,713	.....	2 23	285,276,570	.744	383,524,286
93	127,049,296	.....	2.14	271,885,493	.714	380,893,789
94	*d* 127,049,296	.....	2.01	255,369,085	.67	380,893,789
70–94	1,650,485,581	.....	.....	4,185,600,269	.846	4,948,155,769
	True average, Value of commodity		2.54 unit=	.84736÷2.54 =	.3336	ton. Unit Bitum. Coal.
1894	*e* 117,950,348	.....	2.01	237,080,199	.670	353,615,143
95	*f* 135,118,193	.....	1.79	241,861,565	.597	405,084,343
73–95	.....	.....	.....	4,177,659,353	.813	5,137,468,695

a Mostly bituminous, by difference between "Total Coal" and "Pennsylvania Anthracite." See Mineral Industry, Vol. II, page 218.

b Average price for Cumberland coal at Baltimore, reduced to short tons.

c Computed.

d Estimated, return not received.

e Revised from Mineral Industry, Vol. III, page 130.

f From Mineral Resources sheet, 1895.

TABLE 21.

Production and Value of **Petroleum** in the United States. Gold Basis.

Year	Product in Barrels *a*	Price per Barrel: Currency $ *b*	Price per Barrel: Gold $ *c*	Value in Dollars *d*	Commodity Units: Price per Unit of .9489 bbl $	Commodity Units: Number of Units
1870	.....	.....	.....	.....	.....	.....
71	5,205,234	4.34	3.88	20,196,308	3.68	5,486,317
72	6,293,194	3.64	3 24	20,389,949	3.074	6,633,026
70–72	11,498,428	.....	3.53	40,586,257	3.35	12,119,343
73	9,844,744	1.83	1 61	15,850,038	1.528	10,376,360
74	10,926,945	1.17	1.05	11,473,292	.996	11,517,000
75	8,787,506	1.35	1.17	10,291 372	1.11	9,262,031
76	8 968,906	2.56	2.30	20 628,484	2 18	9,453,227
77	13,135,475	2.42	2.31	30 342,947	2.192	13,844,791
78	15,163 462	1.19	1.18	17,892,885	1.12	15,982,289
79	19,785,176	.859	.859	16,995,466	.815	20,853 576
1880	26,286,123	.....	.92	24,183,233	.873	27,705,574
81	27 661,238	.....	.92	25,448,339	.873	29,151,945
82	30,510,830	.....	.789	24 065,988	.748	32,158,415
83	23,449,633	.....	1.10	25,790,252	1.044	24,715,913
84	24,218,438	.....	.851	20 59 ,966	.807	25,526,234
85	21,847,205	.....	.879	19,198,243	.834	23,026,954
86	28,064,841	.....	.712	19,996,313	.676	29,580,342
87	28 278,866	.....	.667	18,877,094	.63	29 805,925
88	27,612,025	.....	.649	17,947,620	.616	29,103,074
89	35,163,513	.....	.767	26,963,340	.727	37,062,343
1890	45 822 672	.....	.772	35,365,105	.73	48 297,096
91	54,291.980	.....	.56	30,526,553	.533	57,223.747
92	50,509,136	.....	.51	25,901,436	.486	53,236,629
93	*e* 50,349,228	.....	.64	*f* 32,223,505	.607	53,068,087
94	.....	.....	.....	.....	.....	.....
70–94	572,176,370	.....	.....	511,143,728	.848	603,073,894
	True average.. Value of comm	..... odity	.893 unit=	.84736 ÷ .893 =	.9489	bbl. Unit for Petroleum
1894	*g* 49,344,516	.....	.720	35,522.095	.683	52,009,120
95	*g* 52 983,526	.....	1.089	57,691,279	1.033	55,844,640
73–95	.....	.....	.....	563 770.845	.807	698.808,311

a From 1871 to 1879 inclusive, from Mineral Resources, 1883, page 201, and from 1880 to 1892 inclusive, from Mineral Resources, 1892, pages 9 to 11.

b From Mineral Resources, 1883, page 203.

c Computed from *b* to 1879. From 1880 computed from *a* and *d*.

d To 1880 computed. From 1880 Mineral Resources.

e From Mineral Industry, Vol. II, page 527.

f Computed from *c* and *e*.

g From Mineral Resources.

TABLE 22.

Showing the number of commodity units, the value per unit and the total value of the 21 principal productions of the United States based upon an average valuation of $1.00 per unit for all articles for the period 1870 to 1872 inclusive. Also showing for each year the difference between actual value and value at prices prevailing during the period 1870 to 1872 inclusive, or the amount of the depreciation. All values in gold.

Year	Number of Commodity Units	Price per Unit	Actual Value 21 Principal Commodities in U. S. Dollars	Difference between Actual Values and Values at Prices of 1870-72 Dollars
1870	3 202,443,041	$ 1.021	3,270,126,820	.....
71	3,270,876,852	1.023	3,346,450,218	.....
72	3,468,611,441	.958	3,325,036,677	.....
70-72	9,941,613,715	1.00	9,941,613,715	.....
73	3 558,282,287	.9413	3,349,418,984	208,863,303
74	3,513,204,400	.9687	3,403,083,705	110,120,695
75	3,809,422,121	.8438	3,214,185,646	595,236,475
76	3 891,648,588	.8314	3,235,681,229	655,967,359
77	4,127,233,309	.8146	3,362,187,716	765,045,593
78	4,416,789,862	.7587	3 351,494,426	1,065 295,436
79	4,703,564,990	.7774	3,657,046,161	1,046 518,829
1880	4,936,037 367	.8493	4,192 446 469	743,590,898
81	4,731,811,889	.9717	4 597 951,799	133 860,090
82	5,203 963,049	.9160	4 766,699,663	437,263,386
83	5,513,852 771	.9150	5,045,259,380	468 593,391
84	5,753,472,553	.8634	4,967,177,449	786 295,104
85	5,714 026,325	.8542	4 880 809,153	833 217,172
86	5,827,289,782	.8251	4 807 944,254	1,019,345,528
87	5 842 169,128	.8785	5 131,615,486	710 553,642
88	6 358 245,861	.8234	5 234 894,670	1,123,351,191
89	5 871,500,790	.7856	4,613,166,186	1,258 334,604
1890	5,667 452,687	.8537	4 838 250,909	829,201,778
91	6 327,323 148	.8018	5,073,835,731	1,253,487,417
92	6,248,573,370	.7641	4,774,502 107	1 474,071,263
93	6,878,957,898	.7619	5,241,158,445	1,637,799 453
94 *a*	6,529,595,072	.7141	4,663,500,762	1,866,094,310
73-94	115,424,417,247		96,402,320,330	
94 *b*	6 600,489,401	.7130	4,706,206,123	1,894,283,278
95 *c*	7,269,586,347	.5870	4,267,047,027	3,002,539 320
70-95	132,706,511,638	.834	110,653,676,433	22,052,835,205
73-95	122,764 897,923	.820	100,712,062,718	22,052,835,205

a Pig iron, silver, anthracite and bituminous coal estimated and estimate used in determination of common value of commodity unit.
b Revised and complete.
c Complete except tobacco.

DIAGRAM 22-a.

Showing the average price per commodity unit of 21 principal productions of the United States for years 1870–95 inclusive, based upon a valuation of one dollar per unit for the period 1870–71–72.

The height of the space allotted to each year shows the price per unit, while the width of the space is made proportional to the total number of units for that year, hence the area of the white space represents the total actual value for the year, and the shaded area shows the difference between actual value and value at prices prevailing during the period 1870–71–72.

The figures in the shaded parts are millions of dollars and represent for each year the depreciation on 21 commodities. All values are in gold.

The commodities made use of are:

Wheat	Corn	Oats	Barley	Potatoes	Hay	Tobacco
Cotton	Wool	Horses	Mules	Milch Cows	Oxen	Sheep
Swine	Pig Iron	Copper	Silver	Anthr. Coal	Bitum. Coal	Petroleum.

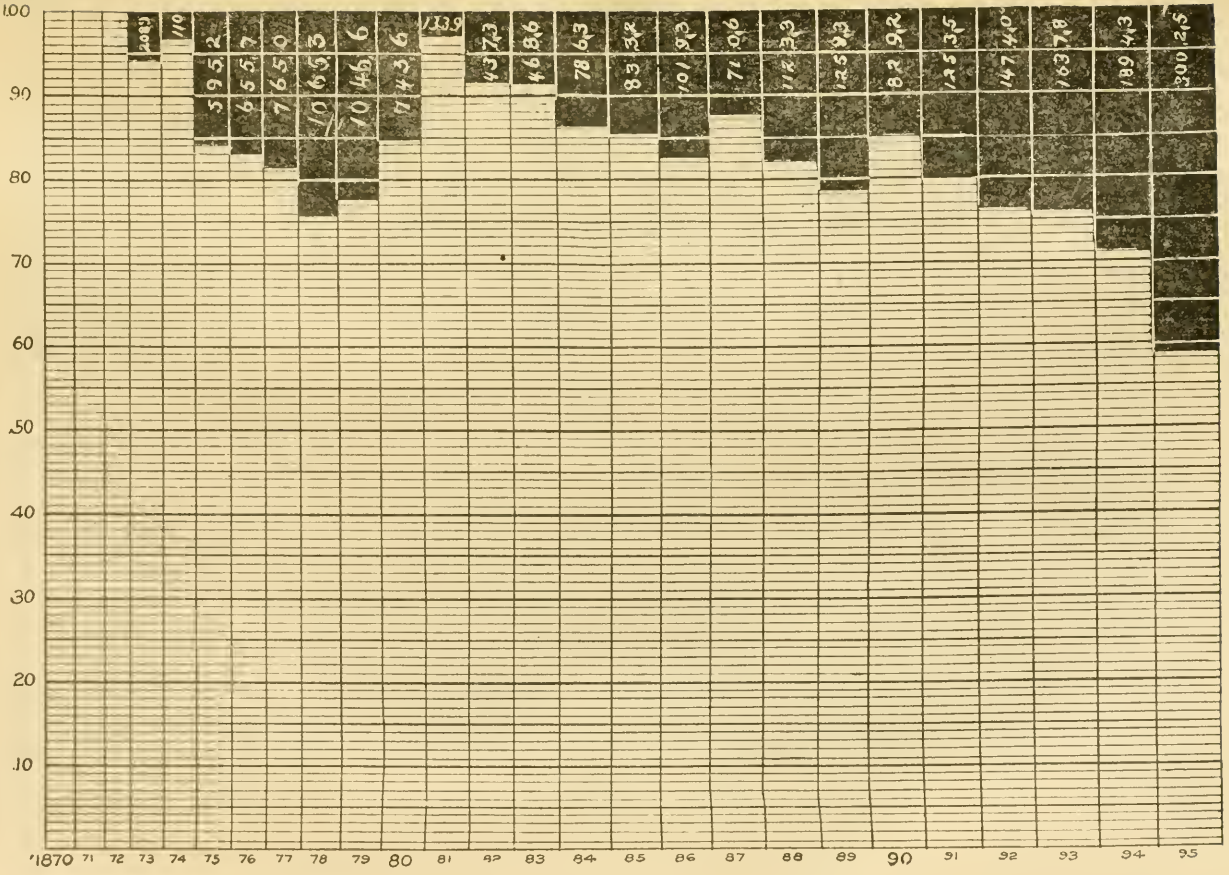
100
90
80
70
60
50
40
30
20
10
1870 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95
110
139
4273
4686
7863
8338
9643
11706
12583
12583
8292
13535
14740
19378
19413
20025

DIAGRAM 22

Showing gold price per unit and number of commodity units produced

21 ARTICLES

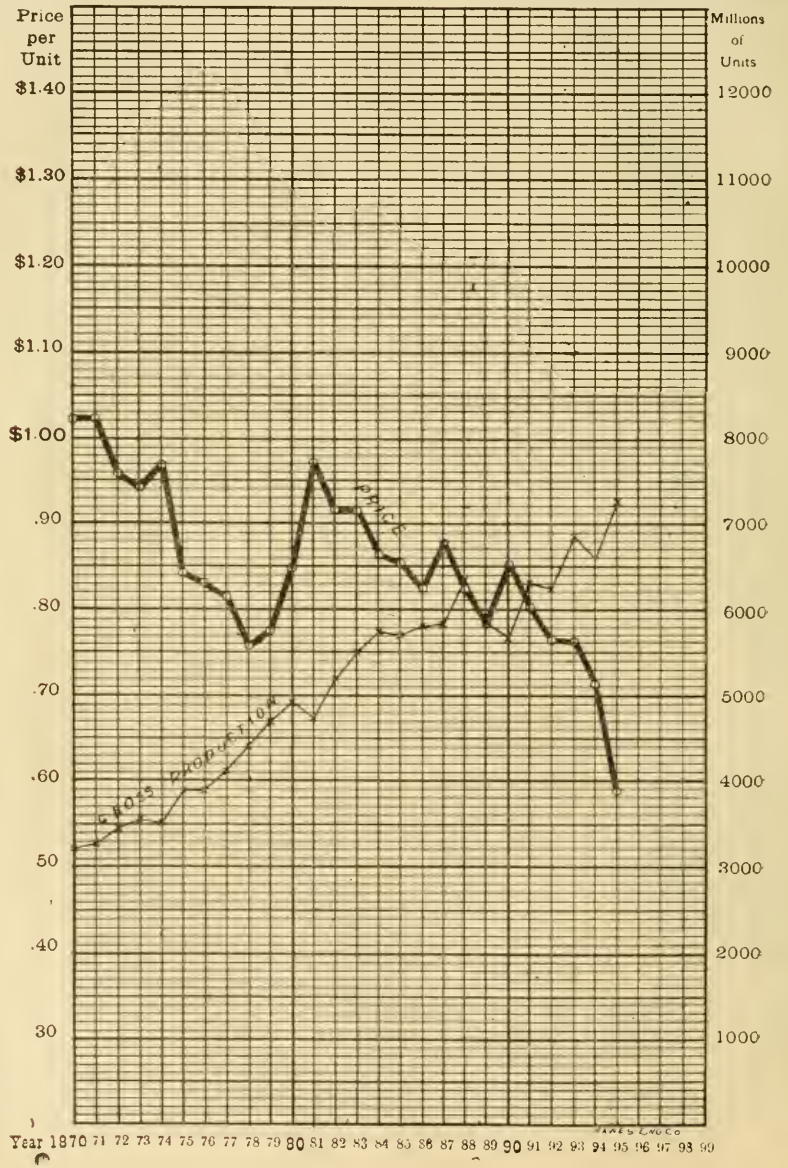

TABLE 23.

Index Numbers.

Comparison and combination of seven systems, six reduced to a basis of 1870–1872, inclusive=100, and one system upon basis 1867–1877=100.

Year	United States		British		French	German	Indian	Arithmetical Average	Year
	This Paper 21 Commodities	Treasury Dept. 8 Groups	London Econ. 47 Articles 22 Classes	Sauerbeck 45 Articles Basis 1867–77 =100	Soetbeer 22 Classes	Soetbeer 114 Articles	Palgrave 7 Articles Prices Reduced to Gold		
1870	102.1	95.8	98.0	96.0	91.5	95.6	101.0	97.3	1870
71	102.3	100.4	97.3	100.0	102.9	98.9	95.3	99.5	71
72	95.8	103 9	104.7	109.0	105.6	105.5	97 0	102.1	72
73	94.1	99.6	109.9	111.0	105.2	107.6	97.8	102.3	73
74	96.9	97.5	108.4	102 0	97.2	106.0	102.2	101.5	74
75	84.4	92.6	103.1	96.0	95.4	101.1	85.2	94.0	75
76	83.1	85.6	100.4	95.0	95.6	99.9	85 0	92.1	76
77	81.5	85.3	101.4	94.0	96.4	99 4	94.8	93.3	77
78	75.9	81.6	93 8	87.0	91.9	93.9	104 3	89.8	78
79	77.7	78.9	82.3	83.0	87.6	91 1	104.1	86.4	79
1880	84.9	87.3	94.2	88.0	88.6	94.9	93.8	90.2	1880
81	97.2	86.3	87.5	85.0	86.9	94 2	83.1	88.6	81
82	91.6	88.6	89 9	84.0	84.8	95.1	75.2	87.0	82
83	91.5	86.6	86.2	82.0	80.3	95.1	84.5	86.6	83
84	86.3	81.2	81.5	76.0	.....	88.9	84.9	83.1	84
85	85.4	75.9	76 1	72 0	.....	84.6	.....	78.8	85
86	82 5	75.0	73.8	69.0	.....	81.7	.....	76.4	86
87	87.9	75.6	75.2	68.0	.....	.....	.....	76.7	87
88	82.3	76.9	81.4	70 0	.....	.....	.....	77.6	88
89	83 78.6	76 76.9	79.8	72.0	.....	.....	.....	76.8	89
1890	85.4	75.4	81.6	72.0	.....	.....	.....	78.6	1890
91	80.2	75.3	81.2	72.0	.....	.....	.....	77.2	91
92	76.4	.....	77 9	68.0	.....	.....	.....	74.1	92
93	76.2	.....	77.4	68 0	.....	.....	.....	73.9	93
94	71.3	.....	76.0	63 0	.....	.....	.....	70.1	94
1895	58.7	.....	70.2	62 0	.....	.....	.....	63.6	1895

Note—Since the completion of the cute of the Diagram of Table 23 the Sauerbeck numbers for '70, '71 and '72 have been received, and show the series as above printed to be too high by 1.7 in 70-72 to 1. in '95. In Diagram 23c the black line in 1895 should be at 63.6 instead of 64.5 as shown.

DIAGRAM 23 INDEX NUMBERS

U S Treasury Department 8 Groups ——— United States

Daggett 21 Commodities ——— " "

Basis 1870 - 72 = 100

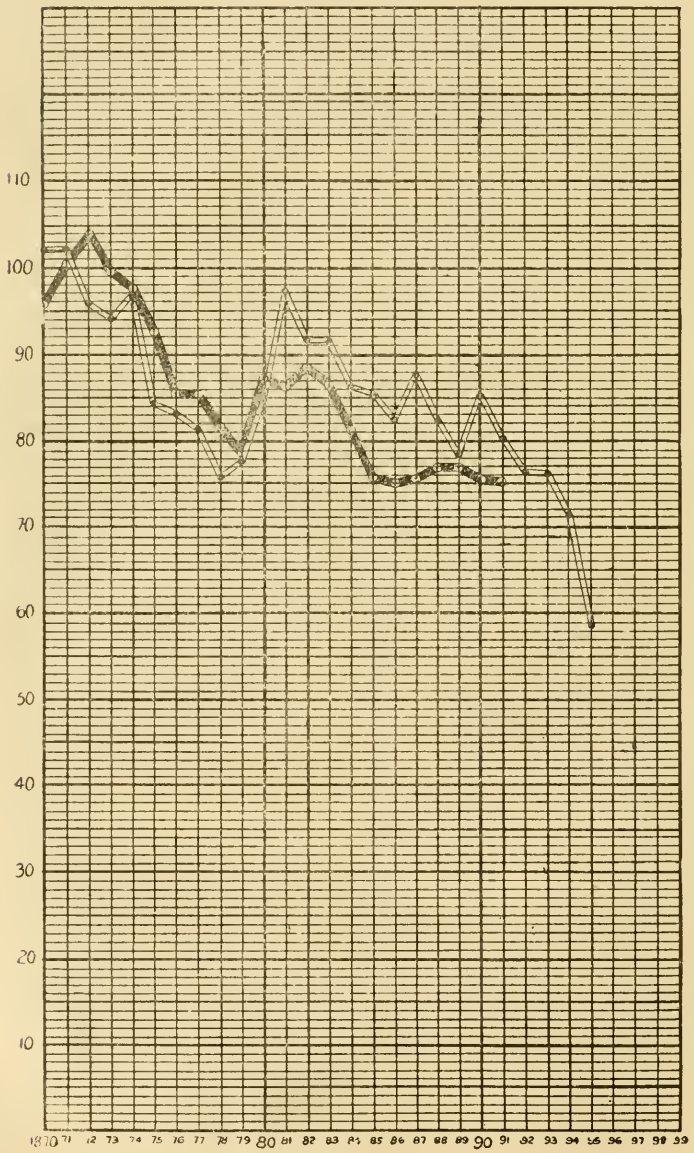

DIAGRAM-23-a INDEX NUMBERS

London Economist 47 Articles (British)
Saurbeck 45 Articles ..
Basis 1870-72 100 and 1867-77 = 100

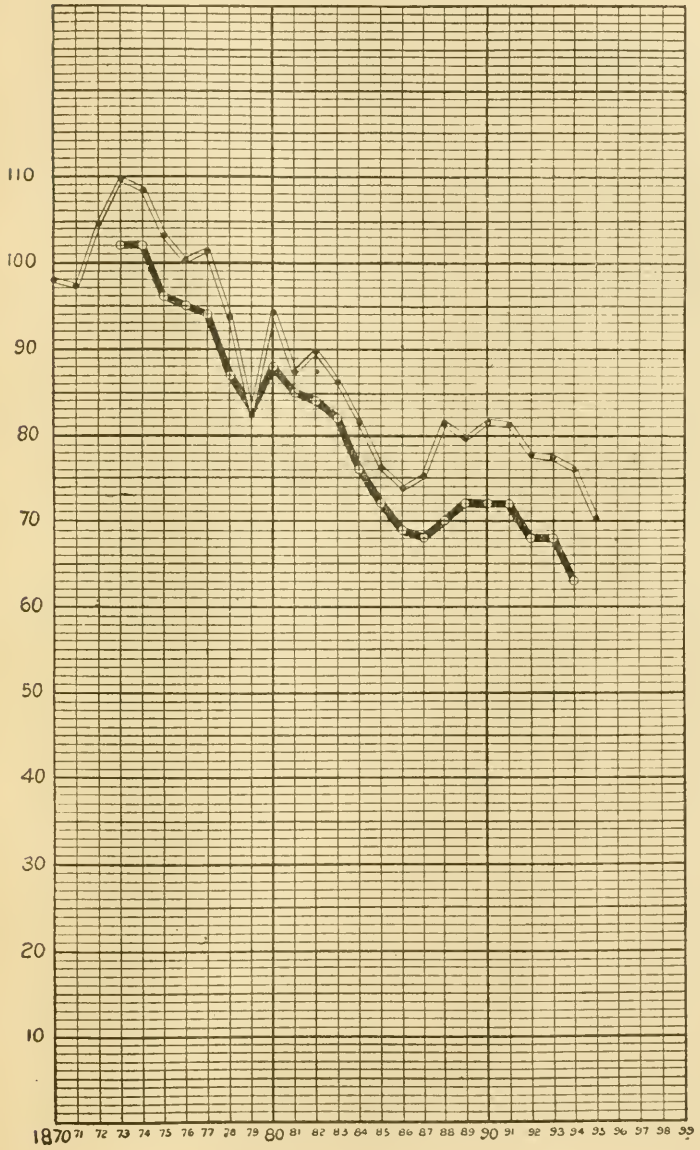

DIAGRAM 23-b INDEX NUMBERS

Soetbeer 22 Classes 114 Articles
Palgrave 7 "
French
German
Indian
Basis 1870 72 100

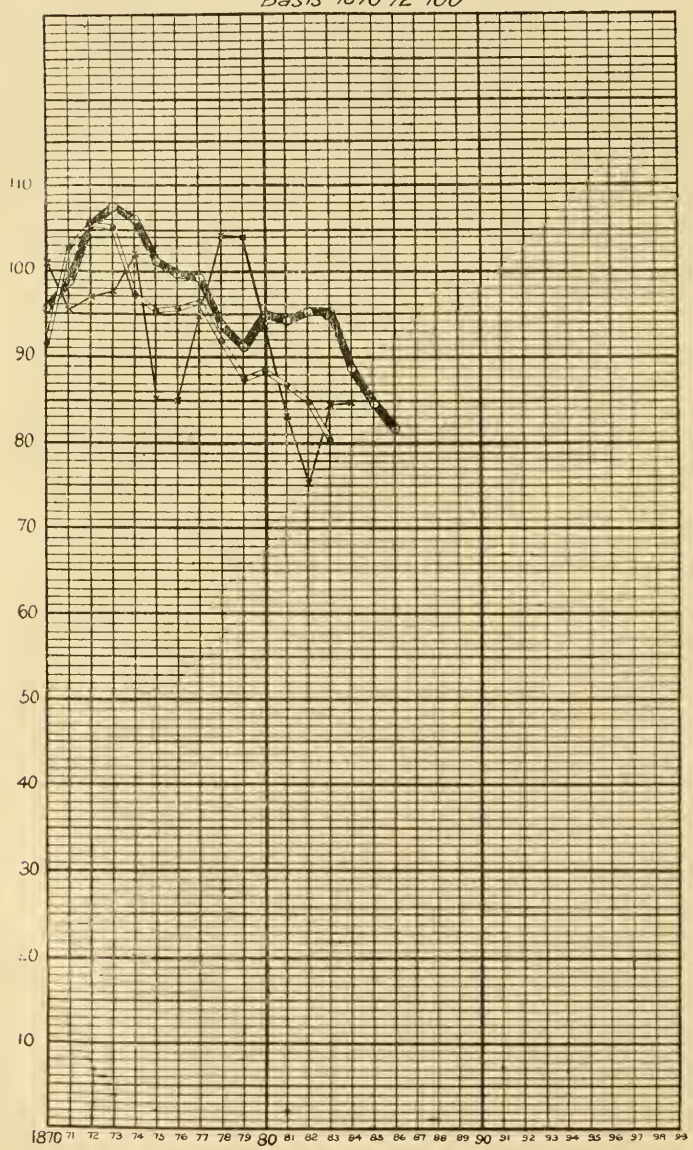

DIAGRAM 23-c INDEX NUMBERS

Arithmetical Average 7 Systems

Silver U S Coining Value (1.2929 per oz.) = 100

Basis Index Numbers 1870-72 = 100

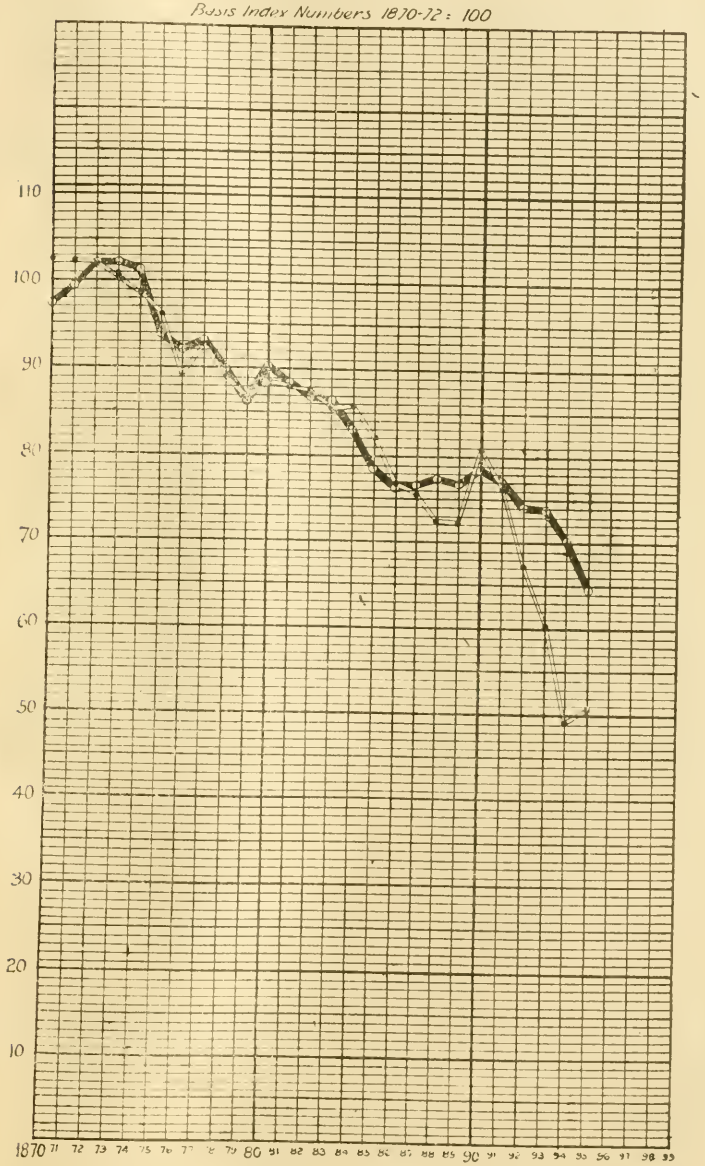

TABLE 26,

Showing total amount of gold in the civilized world, after Soetbeer; gold in the great government banks of Europe and Australia; total circulating gold in civilized countries; the approximate population of gold standard and double standard countries and the circulating gold per capita.

Year	Millions of Dollars			Gold and Double Standard Countries	
	Total Gold in World	Gold in the Government Banks	Total Gold in Circulation	Population Millions	Circulating Gold per Capita
	a	*b*	*a*—*b*	*c*	(*a*—*b*)÷*c*
1870	**2555**	*312*	*2243*	199	11.3
71	2606	*417*	*2189*	202	10.8
72	2658	564	2094	205	10.2
73	2709	611	2098	258	8.1
74	2761	705	2056	262	7.8
75	2812	748	2064	265	7.8
76	2863	800	2063	268	7.7
77	2915	689	2226	274	8.1
78	2966	675	2291	277	8.3
79	3018	630	2388	281	8.5
1880	**3069**	629	2440	284	8.6
81	3092	626	2466	287	8.6
82	3115	707	2408	290	8.3
83	3137	817	2320	294	7.9
84	3160	848	2312	297	7.8
85	**3183**	863	2320	300	7.7
86	3212	*884*	*2328*	303	7.7
87	3240	*905*	*2335*	306	7.6
88	3273	*926*	*2347*	309	7.6
89	3317	947	2370	312	7.6
1890	3357	971	2386	315	7.6
91	3408	*e* 1112	2296	361	6.4
92	3474	1232	2242	365	6.1
93	3583	1217	2366	369	6.4
94	3699	1388	2311	373	6.2
95	3862	*f* 1551	2311	380	6.1

e Muhleman's Monetary System of the World, page 155.
f Economist. Quoted from J. F. Vaile, for beginning of 1866.

Diagram 26.

Showing amount of gold, total and circulating, in civilized countries, and the population of gold standard countries, of gold and double standard countries and of gold double and silver standard countries.

Total gold represented by dotted line.
Circulating gold represented by line with circles.
Population of gold standard countries by single line.

Population of gold and double standard countries by double line.

Population of gold double and silver standard countries by triple lines.

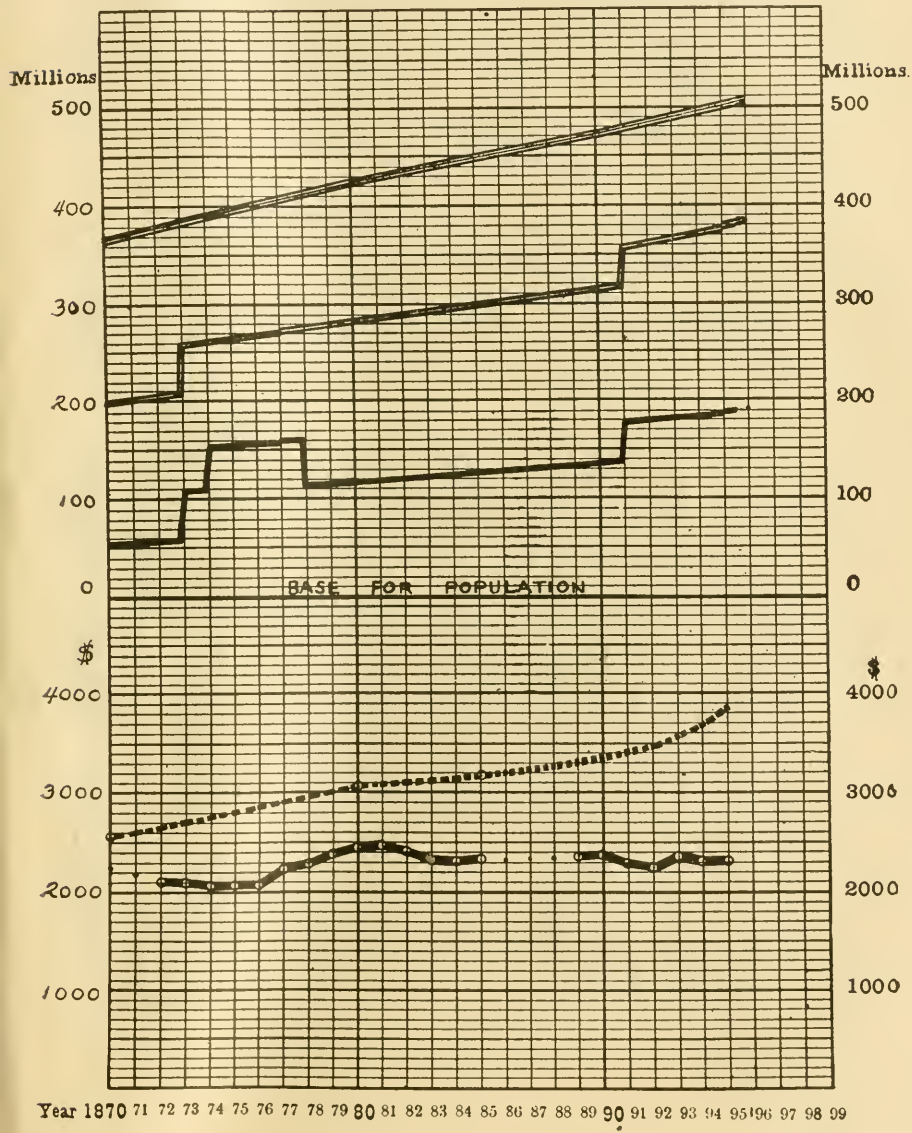

TABLE 27,

Showing the world's product of silver for the years given, as per U. S. Mint Report; also, an estimate of the non-monetary use; the effective monetary supply; the coining and commercial value of the stock of silver in civilized countries; also, the population; the circulating gold and the commercial value of the silver, total and per capita, for civilized countries, for years 1872 to 1895, inclusive.

Year	Millions of Dollars					Commercial Value of Gold and Silver in Circulation in Civilized Countries				Population of Civilized Countries Millions
	U. S. Coining Value			World's Stock of Silver		Circulating Gold in Civilized World	Total Millions	Per Capita Dollars		
	Product of Silver	Non-Monetary Use	Effective Monetary Supply	Coining Value	Commercial Value			With U. S.	Omitting U. S.	
	a	*d*	*e*	*f*	*h*	*c*	b=c+h	b÷i		*i*
							$			
1872	77.1	72.3	4.8	1495.6	1495.6	2094.	3589.6	$9.50	$10.64	378
73	82.9	72.3	10.6	1506.2	1506.2	2098.	3604.2	9.41	10.56	383
74	88.7	72.3	16.4	1522.6	1504.3	2056.	3560.3	9.15	10.28	389
75	91.9	72.3	19.6	1542.2	1486.7	2064.	3550.7	8.99	10.12	395
76	94.4	72.3	22.1	1564.3	1398.5	2063.	3461.5	8.65	9.75	400
77	98.2	72.3	25.9	1590.2	1477.3	2226.	3703.3	9.14	10.33	405
78	101.9	72.3	29.6	1619.8	1443.2	2291.	3734.2	9.09	10.28	411
79	105.6	72.3	33.3	1653.1	1434.9	2388.	3822.9	9.17	10.39	417
1880	109.2	72.3	36.9	1690.0	1497.3	2440.	3937.3	9.33		422
81	115.2	83.6	31.6	1721.6	1515.0	2466.	3981.0	9.32		427
82	117.1	83.6	33.5	1755.1	1541.0	2408.	3949.0	9.14		432
83	119.0	83.6	35.4	1790.5	1536.2	2320.	3856.2	8.82		437
84	120.9	83.6	37.3	1827.8	1573.7	2312.	3885.7	8.79		442
85	122.8	83.6	39.2	1867.0	1536.5	2320.	3856.5	8.63		447
86	120.6	113.2	7.4	1874.4	1441.4	2328.	3769.4	8.36		451
87	124.3	113.2	11.1	1885.5	1425.4	2335.	3760.4	8.25		456
88	140.7	113.2	27.5	1913.0	1390.8	2347.	3737.8	8.11		461
89	155.4	113.2	42.2	1955.2	1413.6	2370.	3783.6	8.12		466
1890	163.0	113.2	49.8	2005.0	1622.0	2386.	4008.0	8.51		471
91	177.4	123.0	54.4	2059.4	1573.4	2296.	3869.4	8.11		477
92	198.0	123.0	75.0	2134.4	1436.5	2242.	3678.5	7.62		483
93	214.7	123.0	91.7	2226.1	1342.3	2366.	3708.3	7.60		488
94	216.9	123.0	93.9	2320.0	1139.1	2311.	3450.1	6.98		494
95	226.0	123.0	103.0	2423.0	1226.0	2311.	3537.0	7.07		500
Total	3181.9	2249.7	932.2	.....	.....	.....	.....	.....		.....

DIAGRAM 27

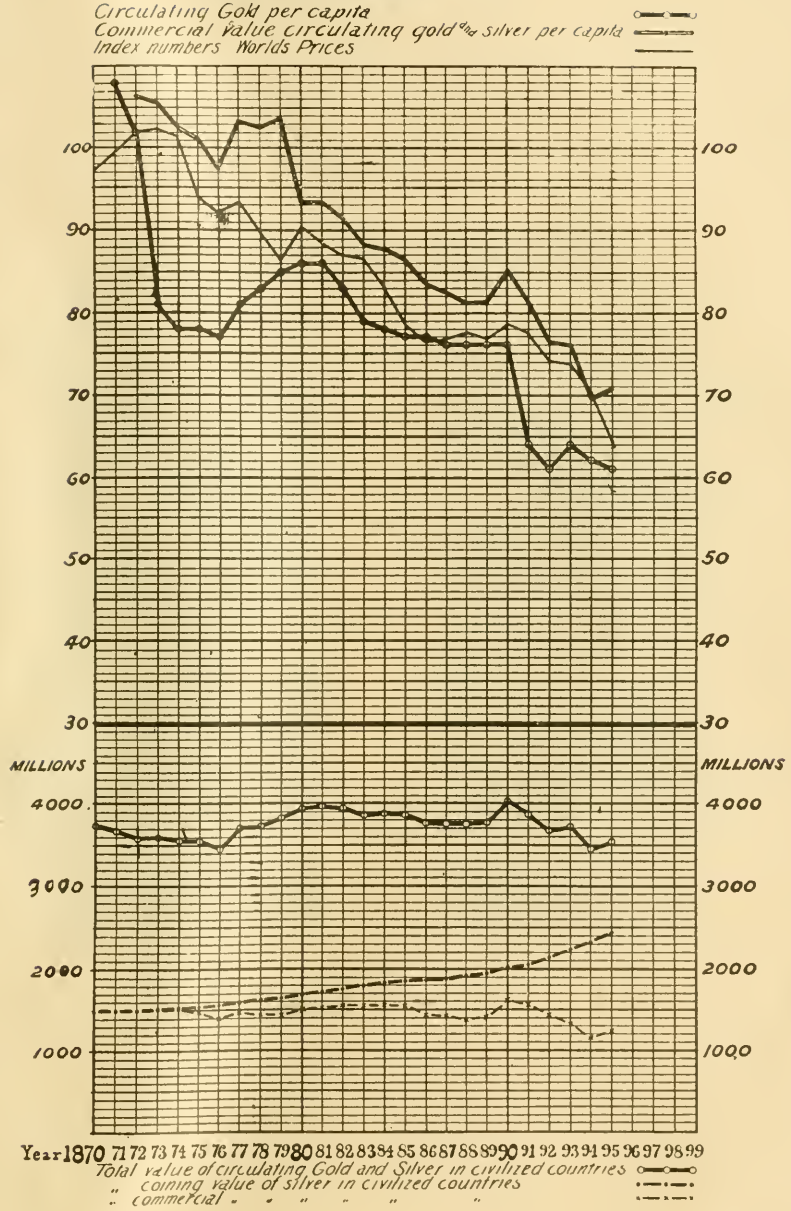
Circulating Gold per capita
Commercial value circulating gold & silver per capita
Index numbers Worlds Prices
100
90
80
70
60
50
40
30
MILLIONS
4000
3000
2000
1000
Year 1870 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99
Total value of circulating Gold and Silver in civilized countries
" coining value of silver in civilized countries
" commercial " " " " " "

DIAGRAM - 25. PRICE & CONSUMPTION PER CAPITA (IN UNITS)